Occidental Medical Times.

Vol. XII. Aug., Sept., Oct., 1898. Nos. 8 9-10

SOME RECENT LEGISLATION.

By H. E. Sanderson, M. D., Assistant Physician State Asylum for Insane, Stockton, Cal.

Read before the Medical Society of the State of California.

The past year has been marked by numerous legal enactments, or attempts at such, of interest to the medical profession. To review all, or even a considerable number, of such bills would be wearisome to you and of no special value. Your committee shall be content with the consideration of a few measures of such importance to the entire profession as to require more than a passing mention.

The bill which takes precedence in importance this year is the Antivivisection bill now before the U. S. Senate. It is known as "Senate Bill No. 1053." The Committee on the District of Columbia have already unanimously reported in its favor. The advocates of the bill claim that its purpose is to merely check abuses of experimentation with animals. They claim that it will not interfere with proper experimentation. The bill is such a complicated affair, and capable of such various interpretation, that we must content ourselves with the consideration of some of its main features.

The title of this measure is "A Bill for the further prevention of cruelty to animals in the District of Columbia." This title is itself misleading. Its real object is the restriction of and regulation of experiments upon animals. A bill of similar nature and title was reported upon in the 54th Congress, and an attempt to change its name to "A Bill to regulate vivisection in the District of Columbia" was defeated. Of course, the present title is such as to mislead many into signing petitions in its favor. Its father is the "Washington Humane Society," which is hostile to vivisection.

In 1894 its president referred to animal experimentation as a subject upon which there is but one sentiment in the society—that of "utter abhorrence and condemnation of the inhuman practice, which, according to the oft expressed opinions of the best physicians and surgeons, is of no practical value to science or medicine." In the face of such a statement, is it not strange that *no* one possessing skilled knowledge upon the subject affected by the bill has been so much as consulted in its preparation?

Some of the main features of the bill are the following: In Section 2 B it says, "The experiment must be performed by a person holding such a license from the Commissioners of the District of Columbia as in this act mentioned, or by a duly authorized officer of the Government of the United States, or of the District of Columbia." Section 3 states that these Commissioners may require the registration of such places, and in such a manner, as they may direct, and wherever for purposes of instruction experiments are made such places shall be approved and registered by the Commissioners, in such manner as they direct. Section 5 provides "That the Commissioners of the District may direct any person performing experiments under this act, from time to time, to make reports to them of the methods employed, and the results of such experiments, in such form and with such details as the said Commission may require." In Section 7 it says: "The Commissioners of the District may at any time disallow or suspend any certificate given under this section."

Accordingly these Commissioners have sole power to grant licenses. They may grant all or refuse all applications for such, thus prohibiting animal experimentation in the District except that by U. S. Government officers or District of Columbia officers, and even the latter they may hamper by demands for reports upon methods and results at any stage of an investigation, as often and as minutely detailed as they may wish. The license may be suspended at any moment—perhaps in the midst of an important investigation; the licenser has no provision as to a hearing nor the right of appeal from a decision.

The Commissioners are the dictators of the medical profession in matters requiring expert knowledge and love of science. What must be the result when this power is wielded by professed enemies of vivisection? They must so wield their power as to please either the medical scientists or the enemies of medical advancement. Whom would they favor? Who are the advocates of the bill—or a large majority of them, at least? If they favor one side they must displease the other; and if the bill was not found to be sufficiently restrictive, still more stringent legislation would soon follow. And these dictators would not be men of science nor physicians, though having entire control over those great leaders of thought, who have already done, and will continue to do, so much for the welfare of mankind and the lower animals. Is this not monstrous?

Section 6 provides "That the President of the United States shall cause all places where experiments on living vertebrate animals are carried on in the District of Columbia to be from time to time visited and inspected without previous notice, for the purpose of securing compliance with the provisions of this Act; and to that end shall appoint four inspectors, who shall serve without compensation, and who shall have authority to visit and inspect the places aforesaid, and who shall report to the President of the United States from time to time, the results of their observations therein, which shall be made public by him.'' Such inspectors are not required to possess any qualifications for such remarkable functions.

It is extremely difficult for our universities and colleges, our hospitals and government laboratories to find men properly equipped for such scientific work, and yet inspectors are to criticize, regulate, and advise as to methods of work, whether properly done, whether upon proper animals, and for proper purposes. What kind of inspection is intended is shown by the fact that an agent of the Washington Humane Society was to be made inspector, according to the original bill. This society certainly will claim and secure representation, at least, if not a majority of the inspectors. What could biologists accomplish under such inquisition, harrassed constantly by ignorant inspectors desiring detailed reports of methods and results?

How prohibitory some sections of the bill would be must depend largely upon the interpretation of courts, as the provisions are of so doubtful a character. Nor can any one say what new lines of experimentation not provided for in the bill, will be required by biology or medicine in the future. Section A provides that ''Every experiment must be performed with a view to the advancement by *new discovery* of physiological knowledge which will be useful for saving or prolonging life, or alleviating suffering.'' According to this, all experiments are prohibited (except lecture demonstrations, elsewhere provided for), which are not for the advancement of knowledge *by new discovery*, and this either physiological or useful for saving or prolonging life, or alleviating suffering. One could not even say how the term ''physiological'' would be interpreted by the courts. Every experimenter must thus pause and deliberate carefully whether he is keeping within the pale of this provision before he dare undertake his experiment. What investigator does not know that experiments without regard to practical application yield results at the time apparently useless practically, but which, nevertheless, lay the foundation of most important knowledge?

This section virtually forbids experiments to confirm results obtained by others, and experiments to acquire manual skill in performing surgical operations. Such operative practice certainly is not an experiment for the advancement of knowledge by *new discovery.* What would be the alternative, then, but the substitution of human beings for animals in such operative practice? An eminent surgeon has said that no one should try to operate for circular suture of the intestines and for intestinal anastomosis without first practising upon animals. According to Section 2 C "The animal must, during the whole of the experiment, be completely under the influence of ether or chloroform, except in inoculation experiments, tests of drugs or medicines, and during recovery from surgical operations." Why limit operators to chloroform and ether? There are experiments in which it is safe and even necessary to produce anesthesia otherwise.

Another section forbids the survival of the animal after an operation unless kept continuously under ether or chloroform, the only exception being inoculation experiments, tests of drugs or medicines, and tests of surgical procedure. This excludes all physiological and pathological experiments when weeks of observation may be necessary. The gastric functions, studied through gastric fistulæ, observations of heart action after artificially induced valvular lesions, study of the nervous system, kidneys, etc., may require equally prolonged observation.

Section 4 provides "That a license shall not be granted to any person under the age of 25 years, unless he be a graduate from a medical college, duly authorized to practice medicine in the District of Columbia." William H. Welch, of Johns-Hopkins University says: "There are graduates of zoölogy and other departments of biology under 25 years of age who are eminently qualified by their training for investigations involving experimentation upon animals."

Dr. Dabney, of the Bureau of Animal Industry under the Department of Agriculture, says: "It would at once stop some of the experiments now in progress, and if it had been enforced in the past years, would have prevented a large proportion of our scientific employes from doing this class of work." It has been claimed that this bill takes out of the hands of the United States Government the scientific work of one of its departments and puts it under the control of officials of the District of Columbia, and such work also as concerns the agricultural interests of the whole nation.

In addition to other absurd provisions, it says that a special certificate must be procured if a cat, a dog, an ass, a mule, or a horse is used, such certificate to specify certain facts, and even government officers are not exempt from this rule.

The advocates of this bill claim that it is necessitated by the existing abuses of vivisection. As a matter of fact there is no such evil. There never has been any necessity for restrictive measures, and such a law is simply meddlesome. Public opinion and ordinary law are quite sufficient for those rare instances in which heedless causing of pain to animals during experimentation, is proven.

In the drafting of this bill, those familiar with the needs of scientific and practical medicine and biology, have not been consulted. The committee reporting upon it have never given adequate opportunity to such men to present their views. When a similar bill was being considered in April, 1896, Surgeon-General Stenberg was summoned by the committee, without a day's warning, so that proper preparation for so important an occasion was impossible. A similar bill was introduced into the British Parliament some time ago, and after its passage still more bills were introduced for the total abolition of experiments upon animals. It will be the same thing here. This bill is but the entering wedge, as the final object of its sponsors is well known to be total prohibition. Compromise is, therefore, out of the question. It is either "for" or "against" such prohibition.

The stock arguments used by the antivivisectionist are the following:

1. Medical and scientific men are divided in opinion upon this subject.

2. Experiments upon animals have yielded results of little or no value to science or medicine.

3. Such experiments are conducted with wanton cruelty and are brutalizing to those who witness or practise them.

In answer to these statements the following can be said:

1. Not a single medical or scientific society is known to have favored the bill. Over a hundred such societies have protested against its passage. These societies represent the rank and file of the medical profession. Amongst the list are: The National Academy of Sciences, The American Association for the Advancement of Sciences, The Society for the Promotion of Agricultural Science, The American Medical Association, The Congress of American Physicians and Surgeons, The American Public Health Association, The United States Veterinary Medical Association, The Association of American Physicians, The American Surgical Association, The Association of American Medical Colleges, The New York State Medical Society and Association, and other State societies, The New York Academy of Medicine, etc.

2. It would be a strange anomaly, if the experimental method which has been the great instrument of modern scientific progress, should have no value for medical science. How about the proof of the circulation of the blood, the establishment of the germ theory of disease; the introduction of antiseptic surgery; the prevention of puerperal fever; the antitoxin treatment for diphtheria and other diseases; the Pasteur inoculation for rabies, and the thyroid treatment for myxedema and cretinism? Countless thousands of lives have been and will be saved by means of results acquired through animal experimentation.

3. This is a gratuitous insult without a particle of foundation. The antivivisectionists have distributed literature broadcast amongst the public which conveys utterly false impressions. Such emotional and misleading appeals, contain statements which have been refuted time and again in the leading journals of the country. Anesthetics are universally used wherever they can be in experimental laboratories. Such charges have been made and investigated in Massachusetts and in Great Britain, and have been refuted every time after governmental investigation. In the District of Columbia, no authenticated instance has been pointed out. Secrecy is not employed in conducting such experiments. Any qualified medical or scientific man may witness them, and they are described in detail in scientific publications. The real object of the advocates of this measure is to influence legislation in the various States. Similar legislation in England has had an unfortunate influence upon medical science there, if reports be true. It has been claimed that Lord Lister and many others have been driven to seek laboratories on the continent for their investigations.

There is plenty of law now in the District of Columbia for the prevention of cruelty to animals, and experimenters are subject to the law. Their demand that all laboratory doors be thrown open for their agents to procure evidence would lead to a system of espionage degrading and intolerable to scientific men in charge of the laboratories and would be as unnecessary as it would be insulting. Finally, not only has such experimentation benefited mankind, but also these very animals for whom our sentimental anti-vivisectionists loudly supplicate—as witness the results now achieved in the treatment of pleuro-pneumonia, tuberculosis, glanders, anthrax, hog cholera and Texas cattle fever.

A bill that is at present attracting considerable attention on the part of the profession as well as the public is the "bill to regulate the granting of marriage licenses," introduced into the Legislature by Mr. Parker. Of course all admit that "marriage is a failure" in many cases, and many of us believe that "marriage is a crime," or little short of it at times, with society as it is at present constituted. That heredity plays a very large part in the history of physical and mental ills, and in the propagation of crime, with all their consequent misery, none know better than the medical profession, and that preventive medicine should embrace methods for restricting and prohibiting the transmission of evil tendencies by attacking the very root of the trouble—marriage with procreation—all admit.

Many plans have been suggested by Utopians—one says castrate the hopelessly insane and confirmed criminals; another says refuse them the rites of marriage, others have still more Spartan-like propositions. That such methods as are employed in improving stock in horses and other lower animals would insure better "stock" in mankind seems self-evident, and although all recognize this cancer on the body politic and the desirability of eradicating it, the plan of attack is a mighty problem that few have attempted to solve.

Granting the necessity for some united action on the part of society, individuals differ greatly as to methods suggested. Can legislation do this, or must it be through the more gradual evolution of society, influenced by the teachings and examples of the pure and noble? The bill introduced by Mr. Parker is an attempt to remedy these matters by legislation.

Of course there are many causes of unhappiness in the world entirely apart from physical condition and not to be reached by legislation. Some of the worst candidates for the parental relation are men and women who could easily pass muster with regard to bodily health. Disposition and temperament are hard to ascertain and not to be regulated by law. Back of laws of this nature is the communistic idea as opposed to that of individual freedom, and while easily carried out in that state of society so interestingly depicted by Bellamy, we doubt its feasibility at the present time.

The enemies of this bill say it is no new restriction. They say such measures have been tried, but the salutary effects did not appear. According to Herbert Spencer there was an experiment in Germany made with the view of preventing persons from marrying who were too poor to take care of a family. As a result there was an immediate large increase in illegitimate births. It is said that 45 per cent. of the births of one of the leading cities of Austria are illegitimate, and that this is due to a law preventing persons of illegitimate birth from marrying. The Spartans believed in stirpiculture and sought physical perfection by destroying defective infants. But they did not last long as a nation. If genius is born of neurotic stock, as some believe, would not the finest, the keenest fruitage of the mind be lessened by such universally strong physical frames.

The law of nature which impels the sexes to come together is stronger than any human enactment, and the right to conform to it is a natural and inalienable right of which man should not be deprived because of mere misfortune. It is going only a little further to say he shall not live. The more marriage is encouraged the freer the community will be from many evils. Such legislation puts the family circle on a par with the stable and crushes out the element of conjugal love. Is not the criminal less dangerous to society if married than if kept single, and prohibited from establishing a home of his own?

The whole question is beset with great difficulties. It is claimed that this bill has back of it an organized movement for the establishment of a "reign of science." While not expecting the bill to pass, they are using it as a means of inducing discussion and making converts to the idea. It is but the beginning of an elaborate scheme of social government. Next will come the killing of incurables, confirmed criminals, mishapen babies will be put out of the way like superfluous kittens, rather than allowed to live a life with only suffering in store for them.

The bill presupposes a scientific knowledge of heredity; the laws of descent are still among the mysteries of nature. Insanity often passes over one generation to crop out in the third or fourth or disappear altogether. Disease and crime are often eradicable. It is well established in biology that the defective members of society tend naturally to sterility and extinction. Did the criminal and infirm depend upon self-propagation for successors we would never hear more of the increase of disease, crime and insanity. It is the falling into these classes from all other ranks of society which accounts for the increase of defectives. Some one has aptly said: "These are the lower branches of the social forest which fail to reach the sunlight of race progress, and under inexorable natural law degenerate, fall to the ground and finally become lost in the mold lying by the wayside of advancing evolution." Emerson once said, "hitch your wagon to a star." But the trouble seems to be to reach the star in order to perform the "hitching" process. It is maintained that the bill is impracticable partly because a family physician could not be induced to betray his patient's secret, and he alone might be the one to know the facts desired. Such a bill could not be enforced without public opinion supporting it and public appreciation could not be obtained at the present time. It might also be declared unconstitutional. Before such a bill as Mr. Parker's could accomplish anything every other State must enact the same laws. How can you prove whether a man has dipsomania or tertiary syphilis, except by summoning witnesses, and how can you *compel* them to testify? These are some of the arguments used against the bill.

In favor of it, however, much may also be said. Although the bill assumes legislative authority that apparently does not belong to the functions of the State, it suggests a very grave subject for thought. The marriage of persons having hereditary or acquired disease should be prevented in every possible way. Public opinion aided by parental influence can do much to prevent either sex from marrying, when grave physical imperfections exist. The young can not be expected to think sufficiently of such things. The instinct of procreation is strong, it is a passion, but it must be properly controlled. "Tares do not produce wheat, nor can a fig be gathered from thistles" The more degenerates and defectives the weaker the strength of the State. Such people must be supported largely by the State.

The self-preservation of society impels a consideration of the enactment of the Parker bill. Has not the State a right to lend a helping hand to nature's unalterable law—the survival of the fittest? Some condemn such laws as "cranky." Anything out of the usual is apt to be called "cranky." Should we accuse "Divine Providence" with all the crimes against progeny, and quietly allow degenerate offspring to be forced into being, cursed from the moment of impregnation to the hour of death? Law is law and physical law is inexorable—the wise may well stop to count the cost of our present ignorance and disregard of the immutable results of hereditary taint.

The world should be taught that all children have a right to be well born, and the State should step in and guarantee the right which irresponsible, unthinking parentage withholds. Sarah Grand hit the nail on the head when she said in the "Heavenly Twins," that the doctors should do the marrying instead of the preachers. Prison and asylum reports show that criminals and the insane owe their misfortune to imperfect parentage. This bill has had its origin as the result of careful study and deliberation on the part of scientists, and has not had its origin in the kind of fads which suggest a tax on bachelors and in other whims.

As much attention should be given to the propagation of the human race as is bestowed upon animals of the lower order. Many advocates of the bill believe it to be practicable at the present time, while others think that if it is not at present feasible, it will succeed in arousing public opinion to the extent of producing action at some future time, and thus prove a great blessing to the world.

To us the question seems to be not so much "would it be desirable?" as, "is it practicable *to-day*."

SPINA-BIFIDA, WITH A REPORT OF A CASE.

By H. D. LAWHEAD, M.D., Woodland, Cal.

Read before the California Northern District Medical Society.

Though Dr. Holmes states that spina bifida is a congenital malformation seen more frequently than any other except harelip, I am quite aware that an ordinary case of this malady could be of special interest to the neurologist or pathologist only. But as the case I shall report, is in some respects unique, I trust this body of intelligent general practitioners may find in it some points worthy of consideration and discussion.

I regret, however, that I shall not be able to present such a report as I had planned to give. I expected to have had an X-ray photograph, showing the vertebral lesion, and toward this end Dr. Albert Abrams, of San Francisco, kindly examined the case for me with his complete X-ray apparatus; but just at the critical moment his Crooks tube snapped; and with the smaller tubes at hand the rays could not penetrate the abdominal viscera. The demonstration however, of the thoracic cavity, as well as of the bony parts surrounding it, was clear-cut, definite and interesting, showing the lungs to be normal, and placing before the eye the position, outline and movements of the liver, and the heart and outlining the arch of the aorta. For these reasons the debatable features must reach you in much more theoretical form than would otherwise have been the case.

The history is briefly as follows: R. P.—, the fourth son and fifth child of the family, was born in March, 1881, to healthy and vigorous parents. Dr. Thomas Ross, of Sacramento, who confined the mother, discovered on the second day after birth, a small ovoid, soft, elastic, sessile tumor at the junction of the lumbar with the sacral spine. He diagnosed spina bifida and informed the parents that the child would probably live but a short time. Dr. Ross advised gentle support with light pressure over the tumor and urged quiet and great care of the child.

Under the most intelligent nursing, the babe grew normally, showing, at first, no mental disturbance except occasional night-terrors; and no physical peculiarity except that the nurse complained it was difficult to put his feet into his shoes because the toes curved downward and dragged on the bottom of the shoes. The boy never suffered from fever, inflammatory trouble nor acute illness at any time. When about three or four years of age, the parents noticed that the little fellow stumbled and fell more frequently than did other children at the same age. They also were somewhat anxious over his careless and harsh treatment of his feet. He banged his toes, ran over rough ground, jumped from wagons and other elevations with utter disregard.

At about six years of age talipes varus began in the left foot and a little later sluggish perforating ulcers developed on the plantar or outer surfaces. The ulcers were all obstinate and some were impossible to heal. In connection with these ulcers, it was discovered that sensation was materially diminished over the entire foot; though motion was preserved, except in the extensors of the toes, where it was perceptibly weakened. At this stage, amputation was advised by Dr. L. C. Lane, of San Francisco, but the operation was declined.

During the following eight or nine years, the most diligent efforts were maintained by braces, etc., to correct and to prevent deformity, but to no purpose. Five years ago the plantar fascia and the tendons of the tibialis anticus and posticus were severed subcutaneously, and the foot kept in nearly normal position by forcible pressure and braces, with the patient on his back for two or three months. The subcutaneous wounds finally healed, but an indolent ulcer persisted at the site of the skin incision. While the deformity did not recur to nearly the former degree, several trophic ulcers followed which defied treatment.

Sensation progressively faded, though motion was fairly well maintained. Marked sepsis arising, the left leg was amputated in October, 1893, at the junction of the upper with the middle third. At this time, though the patient could walk unaided, sensation was so low that a pin thrust one half its length into the calf of the leg was not felt. Patient made a good recovery after the amputation, with a fairly good stump. An artificial leg has been worn successfully since, with occasional interruptions of a few weeks, now and again, when keloid growths or superficial ulceration at points of pressure forbade its use.

Two months ago, the end of the stump became swollen and rather tender, with some pain running up to the knee. The artificial limb was at once left off, the inflamed stump kept quiet and bathed once daily in hot bichloride solution, 1:6000. Two or three weeks later a small sinus opened, from which has occasionally issued small quantities of pus. About the time this inflammation began, there developed on the inner side of the stump, and near the knee joint, a keloid or fibrous growth which has not yet been removed. Similar growths have been removed from this stump before. Your examination of the parts will afford more satisfaction than any description I can give.

About two years ago, deformity and ulceration began in the right foot in same manner and followed about the same course as had occurred within the years before in the left foot. The right leg was amputated at the Lane Hospital on October 7th, 1897, and the wound healed rapidly without suppuration.

The general health of the patient is now fairly good, though the power of the vesical and anal sphincters is impaired to such a degree that there is frequently slight incontinence of urine and sometimes difficulty in controlling the action of the bowels.

I have given the progressive changes in this case somewhat in detail for the purpose of presenting as clearly as possible the peculiar and definite course followed in its advance. It seems to me that the points in this case which may be studied with most profit are:

1. The interrupted embryonic development which stands at once as the whole cause of the trouble.

2. The pathological conditions which sharply distinguish spina bifida from all forms of ordinary hernia and at the same time explain many of the morbid consequences.

3. The disparity between the sensory and motor disturbances.

4. The characteristics of the trophic ulcers.

5. What behaviour may we now expect, granting that more radical treatment of the defect was forbidden?

6. Would early amputation have been the better course?

As to the first point, the embryonic deficiency. Embryology has demonstrated that the defect occurs very early in the development of the embryo, and that it is due—not so much to failure of the epiblastic layers of the blastoderm to coalesce over the neural canal, as to the failure of the vertebral arches which grow from the mesoblastic somites, to prolong and to insinuate themselves between the epiblastic and epithelial layer without, and the spinal cord within, forming at the same time two structures, the corium of the skin and the meninges of the spinal cord. The epiblast does unite in all forms except the very gravest In those of moderate degree the mesoblast performs part of its function, covering the lesions in the different grades by a structure varying in development from the mere epithelium (simple epiblast) to almost the normal skin (mesoblast and epiblast). The stage at which this development is arrested in any case, determines the type, or class, to which the case belongs, that is, determines whether it be (1) meningocele, (2)meningomyelocele, (3) hydromyelocele or (4) myelocele. The history of the case already given shows that it belongs to the second group—meningomyelocele.

The next step in the morbid anatomy, brings us to the second point for consideration, viz: the pathological conditions which distinguish spina bifida from all forms of ordinary hernia, etc. Ordinarily, a hernia consists in the escape of a normal viscus to an abnormal position through a normal or abnormal opening; but in spina bifida, neither the conditions nor the positions of the more important parts are normal. Elements which should segregate fail to do so. A striking example of this is found in the failure of the epidermal portion of the epiblast to separate from that involuted portion of the same blastodermic layer which lines the neural canal, and from which the cord itself is developed later.

A clear conception of this important point of the morbid anatomy, will, I think, place before the mind, the determining factor, in the evolution of spina bifida—a factor or condition alike responsible for the grave sequelæ which follow, and which increase as certainly and as rapidly as the unfortunate sufferer grows. For, while the spinal cord may develop to even considerable degree, it does not increase in length relatively to the spinal column, and it cannot retreat within its own environments, but is helplessly bound to the skin at the site of the lesion—which in the case under consideration, is the last lumbar vertebra.

As the spinal column lengthens with growth, this vertebra can not extend beyond the extremity of the cord, leaving the cord free within the canal to become relatively shorter and shorter than the canal as the bony column extends—according to the normal method. Hence, aside from deficient development, this portion of the cord, with all the organs dependent upon it for nerve-energy, suffers directly and increasingly from the mechanical violence of traction, pressure, etc., as well as from degenerative changes in the terminal nerves.

The next point, and the one in which this case is perhaps most unique, is the unusual disparity between sensation and motion, already referred to, and which I shall not repeat except to state that in the parts entirely void of sensation, considerable motion was preserved and the volume of the muscles was practically normal, though the muscular tone and elasticity were poor.

From the literature at my command and the answers to inquiries I have made, I conclude that instead of the condition of fair muscular development presented in this case, amyotrophic paralysis is the rule in cases of meningomyelocele equal in other respects to that of the patient whose history I have given. This phenomenon I do not undertake to explain; but I have felt impressed while studying the vague suggestions found in this case, that possibly the anterior columns of the cord, from which the anterior or motor roots of the spinal nerves arise, were not involved in the morbid process to nearly the same extent as were the posterior columns. While there is a slight umbilication at the summit of the tumor, indicating an area of embryonic adhesion, the fairly developed skin, the slow progress of the malady, the symmetrical growth of the child's extremities, and the considerable degree of muscular development, argue with some force that only a portion of the cord is held in slow death by its relentless parent—the epiblast. This idea is strengthened by the two following points in the anatomy of the nervous system:

1. Hammond records (and I know of no dissenting opinion) that the trophic cells exist in the gray matter of the anterior columns of the cord, and attributes to this fact, in part, at least, the preservation of motion and of muscular development found in diseases, the pathological processes of which are mainly confined to the posterior columns.

2. The vaso-motor center for the lower extremities (Wood & Ranney) is situated above the lesion, in the dorso-lumbar region; hence the degree of nutrition maintained in these parts.

Furthermore, the progressive or ascending character of the anesthesia which was so disproportionately marked in this case, coincides with the discovery of Weller, elaborated by H. C. Wood and others, that where the lesion causing anesthesia is in the spinal cord (posterior portion), the disturbances of sensation progress from below upward, affecting the terminal filaments first and following the nerve toward the center of trouble.[1]

These and kindred observations, by unquestioned authority, also shed direct light upon the peripheral lesion—the perforating ulcer which is conspicuous among the secondary manifestations in spina bifida.

The morbid anatomy, as studied by Wood and others, shows conclusively that whether the process be a genuine neuritis, the ulcer is nevertheless a neurosis. For, as above mentioned, the investigations of Duplay and Morat, Ross and Wood, demonstrate that the nerves in and about the ulcer have their coverings thickened and softened, while their fibrils are atrophied. The axis cylinder is practically destroyed. In this respect much the same conditions prevail in the trophic ulcer of spina bifida, as are found in ulceration due to posterior spinal sclerosis.

---

[1] "The ganglionic cells, connected immediately with the nutrition of the muscles, are grouped together in the anterior corners of the spinal cord."—H. C. Wood.

The next question, as to the future behavior of the parts, is, I think, answered suggestively at least, by the conditions of the stump of the first amputation. We find here a diseased bone, which, though the process is not extensive, seems to be taking up the old habit of progressive or ascending decay. Of course we may not be able to determine how much of the present morbid action is due to the central lesion and how much is traumatic; but as all the phenomena are so much like those presented in the earlier stages of the case, the discouraging probability is forced upon us that this is simply one more step in the series which began at the extremities—that it is trophic in character and insidiously sacrificing the tissues toward the central lesion.

Whether earlier operation would have been better, is difficult to decide; but as diseased tissues are always a menace to health, and judging from the patient's improved physical condition and more rapid growth since the operations, it seems reasonably safe to conclude that an earlier operation would have been better, though how much might have been accomplished thereby, it is now impossible to determine.

A PLEA FOR THE STUDY OF MICROSCOPY AND BACTERIOLOGY BY THE GENERAL PRACTITIONER.

By W. N. Sherman, M.D., Merced, Cal.

Read before the Medical Society of the State of California.

Every practitioner of medicine should be a student, pursuing constantly the study of some practical subject, in a methodical way. With advanced medical education must come increased demands and earnest effort toward acquiring the essentials of an up-to-date medical practitioner.

Increased competition, lower fees, poor patients, too often prohibit the ambition of the physician for better opportunities for self improvement, a post-graduate course, or special instruction, and he must content himself with acquiring coveted knowledge by his own individual effort, and at such times as his too often arduous work will permit. It is my desire to point out the way, and briefly to show, some of the advantages of possessing special knowledge in one of the now, most important, scientific branches of our profession.

No instrument yet devised by the ingenuity of man equals the microscope in its universal application to research in the broad do-main of science, and its practical relation to medicine is well known. The greatest advances made in placing scientific medicine on its true foundation date from the application of the microscope to physiological investigations. The microscope alone reveals the true nature of many diseases—hence what a beautiful and useful thing it is to settle so many points that are a great trouble to the physician.

The younger graduates in medicine have received instruction in practical microscopy and bacteriology, but the older ones did not enjoy the same advantages when pursuing their medical education. If, therefore, the junior practitioner expects to continue his calling as an up-to-date man, he must dig it out himself, with the aid of good modern text-books, and earnest personal effort. This is not a difficult matter if given intelligent study. We too often imagine a scientific subject hard to master, but after starting we are surprised that our interest and pleasure therein has made it easy, and gradually and almost unconsciously we progress toward the end of a complete and practical knowledge of our subject.

The first necessity is a good modern instrument and a few good objectives—this is vital to success—for inferior instruments will only hinder and discourage the worker. With a little attention to details and the directions furnished with instruments, one is soon able to acquire sufficient skill in manipulation to begin the study of simple objects. Starting with such clinical work as the microscopical examination of urine, and a careful study of urinary crystals, deposits, tube casts, pus corpuscles, etc., he is soon ready and anxious to take up a higher class of work, such as the examination of the blood. With these studies one may readily acquire sufficient skill in the manipulation of a good instrument to do all ordinary work in practical microscopy. As the interest increases the pleasure also grows and one soon finds his enthusiasm a strong stimulant to greater effort and better work.

I shall now briefly allude to a few of the uses of the microscope that will serve to make us better physicians, to increase our interest in our calling, and to render us more worthy the confidence and esteem of our fellow practitioners and of our patrons. The microscope will be found of great service in the diagnosis and prognosis of disease and a trusty guide to point out indications for treatment. Probably the most frequent use will be the examination of sputa for the tubercle bacilli. This is the quickest and surest method of diagnosis and the best guide as to the progress of a case under treatment. Sometimes the sputa reveal streptococcus infection which is an indication for treatment by an antistreptococcus serum. The same test and treatment has been very successful in many forms of septicemia.

The subject of hematology is of itself a vast field for study. It has become an important matter in the diagnosis and treatment of many diseases and is the only reliable method of differentiating idiopathic anemias, pernicious anemia, leucocythemia, and the various forms and degrees of blood impoverishment. The discovery of bacteria and other microörganisms in the blood has prompted more frequent examination and careful study of this vital fluid. Ehrlich's method of staining blood corpuscles has widened our knowledge of the part played by the phagocyte in its warfare against bacterial invasion. Virchow's teaching of the emigration of the white cell in pathological processes and Schultze's observation of the morphological dissimilarity of the white cells in circulating blood, are important advances in hematology, which we cannot afford to ignore. So many conditions and diseases are illuminated by a careful study of the blood, that it has become a very important and valuable procedure in medical diagnosis. The Widal test applied to the blood of typhoid fever patients has become a reliable means of diagnosis and is used by the Board of Health of the city of New York as the official test.

Before attempting to work with the microscope in clinical or other studies, it is essential to future success and good work that one should become thoroughly acquainted with the instrument and its manipulation, and that one learns how to see with it. The fact of having a fine microscope and accessories in one's possession, is not evidence of ability to use it and work with it. It is well for the medical microscopist to commence with the primitive forms of life and to observe and study them closely.

The study of the white blood corpuscles can never mean much to the man who has never studied the amebæ; still, there is no reason why every medical man or student should not frequently see this primitive form of life so nearly representing true active protoplasm. Amebæ are easily obtained from the horse trough, ponds, or ditches, and may be observed undergoing their characteristic changes in form, and to the student of phagocytosis, examples can often be offered of amebæ devouring bacilli, some thriving on them and others dying from the poison developed by the ingested bacteria. It is not alone the white blood corpuscles whose prototype is found in our ponds and ditches. The action of the cilia of ciliated epithelium is difficult to see and understand, yet the vorticella, a comparatively large organism will nicely illustrate a cell of ciliated epithelium.

This one-celled animal, when expanded, presents a cup-shaped form whose motion is capable of creating currents to or from this cup.

The fresh water algæ present a good example of pro-creation in their earliest development. The diatoms offer a fascinating field of study. They are valuable as test objects and teach us to observe fine, delicate outlines and structure and to test the defining and resolving power of our objectives. They are common and may be found in both fresh and salt water in oyster juice, in polishing powder, earth, sand, and in our drinking water. These are profitable studies to the medical man who desires to master his instrument and will teach him to judge accurately the value of what he sees and to gain a clearer insight into the life of individual cells than he can ever learn from the more practical medical microscopy of the schools.

Were it permissible at this time I might continue to multiply instances of the practical utility of microscopic knowledge in clinical investigations and thereby show its ultimate association with the every day work of the practising physician and the great benefit to be derived from it.

The efforts being made in favor of pure food must necessarily bring the scientific physician into this field of research and his services will be required to assist the proper authorities in their regulation of this matter. He should be able to detect adulterations in nearly all forms of food products. The public regards him as the guardian of its health; to merit the confidence reposed in him he must of necessity know something of these questions and how to investigate them. A special microscopist or chemist cannot reside in every country village, and the simple forms of this work must be done by the physician. He should be able, by modern methods, to detect a tuberculous cow and to analyze and examine infected milk. At present an overwhelming weight of evidence points to the presence of bacilli in the milk of infected cows. It is not necessary that tuberculous ulcers should be present on the udders. Bacilli have been demonstrated in the milk from udders without tuberculous lesions discoverable to the naked eye. One should be able to carefully make the tuberculine test, and, if necessary, to verify it after death by a microscopical examination.

The physician should be able to inspect meat, and to detect impurities in lard, spices, starches, and various other food products. In the great pork packing establishments of Chicago, female microscopists are constantly employed and from each slaughtered hog, a small piece of the diaphragm is extracted and placed under the microscope in order to detect the trichina spiralis if present. This was made necessary by discrimination abroad against our meat products. It is high time we at home took some steps to protect ourselves, and demand an official inspection of all meat sold to the public, by a competent officer. The physician must prove the best qualified person for this work, if he is well informed in microscopy and bacteriology. With the constant advances of sanitary science there will be increased demands for the services of scientific physicians, in the country as well as in the city.

The physician is often called as an expert and if he is able to use the microscope. in its application to forensic medicine, his knowledge will be in demand and his evidence of greater value. The microchemistry of poisons is of itself a vast field of research. The detection of crime is often made easy by means of the microscope in honest and skilful hands. It may be of great value in detecting erasures and changes in manuscript, the character of ink, lead penciling, tracings, and the detection of forged signatures. The identification of blood stains, seminal stains, hair, fiber, etc., often leads to the discovery of the guilty, and has given to the microscope its reputation as an "unerring detective."

The application of the microscope to agriculture, horticulture, viticulture, mineralogy, contagious diseases of animals, food adulterations, the analysis of water and milk, and the micro-chemical investigations of poisons, etc., might be profitably dwelt upon did time permit.

For the ambitious investigator or student there is a vast field for investigation outside the limits of medical microscopy. There is scarcely a microscopic object whose every detail cannot with the camera's aid, be reproduced on paper, hence the great value of photomicrographs for illustrations or reproductions. Glass negatives of microscopic objects have been admitted as evidence in courts of justice. From such negatives the lantern slide may be made and the same object be projected upon canvass screens by means of sunlight or electric light. This is a valuable method of teaching classes and illustrating lectures. Charcot illustrated pathological conditions in his clinical lectures in this manner and it was looked upon as a marvelous, novel, and attractive method of teaching, and remains unsurpassed to this day.

What shall we say in regard to practical bacteriology for the physician? In modern clinical diagnosis and the application of pathological methods, microscopy and bacteriology are so intimately associated as to be inseparable. In the physician's laboratory the microscope and culture tube go together. If we expect to keep abreast of the times and to give our patients the benefit of modern medical science, we must be able at least to solve the ordinary clinical problems of the laboratory. Our microscope must be a modern instrument to be used alongside the clinical thermometer and the stethoscope. It is as necessary in general practice as are aseptic procedures in surgical practice.

The prevailing opinion that the necessary laboratory apparatus are intricate and expensive is an error. A laboratory can be furnished in a simple and inexpensive manner, and the essential laboratory equipment, like the essential knowledge of its manipulation, may be gradually acquired. The items of expense are not an obstacle, for any ingenious mind may devise and a skilful hand construct, most of the necessities. Aside from a good microscope stand and good objectives, a microtome, hematocrit and centrifuge are desirable and the incubator, sterilizer, and water bath are indispensable. A sharp razor, a cork, and a little paraffin, answer the purpose for a modest beginner until he is able to afford a hand or machine microtome.

For a centrifuge the tubes may be purchased for a trifle and their adjustment to a rapid rotating apparatus can be improvised. If one can command a small electric motor, it is an improvement over a hand apparatus. The Arnold steam sterilizer is a cheap and efficient device and may also be used for sterilizing surgical instruments. If this is not attainable, one may use an ordinary Hoffman's iron water bath, and upon it place a copper pail with perforated bottom, and an inside rack for holding the tubes. When the steam escapes from the tube, in the cover, it is evidence of the proper interior temperature. The oven of a small gasoline stove answers the purpose of a dry sterilizer and incubator. The chemical reagents and glassware are simple and inexpensive. Most of the large cities now afford special instructors in bacteriology, but when one cannot afford the time and means for such a course, he must content himself with the only recourse left, viz; to work it out, by practice alone, with the aid of a few good books.

Every general practitioner should possess the ability to give to his patients the benefit of as thorough diagnosis and scientific treatment as a progressive science affords. At the present time there is no excuse for the physician who does not prepare himself to perform thoroughly the work demanded in routine daily practice. Two of the most common errors in diagnosis apply to typhoid fever and diphtheria, both of which are easily recognized by means of laboratory methods. The clinical impossibility of making an accurate diagnosis of diphtheria without a bacteriological examination should prove an inducement to a progressive physician to equip his own laboratory for accurate examinations. Boards of health in cities often supply the physician with sterilized test tubes and swabs for collecting material from suspicious cases when they are returned for laboratory examination and report. Where such advantages are not available, as in country practice, a careful bacteriologist might make a satisfactory examination with a bake oven, wash boiler and other kitchen utensils, as substitutes for the regular sterilizers and incubators.

These same truths apply to many other diseases common to every day practice. If time does not permit the making of the various necessary culture mediums, they may be obtained ready for use from the laboratory of Parke, Davis & Co., or that of some near-by bacteriologist. Gelatin, agar, blood serum, etc., may be preserved for a long time by taking the following additional precautions, which shortens the labor of frequent preparation. Test tubes are cleaned, plugged in the ordinary way except the cotton is only one-half the usual length. They are then sterilized in a hot air sterilizer and filled immediately; after filling, the cotton plug is pushed into the tube half an inch below the top and the plug of antiseptic cotton put over it. After thorough sterilization the tubes are closed with a rubber cap and placed in an air-tight fruit jar to prevent evaporation. The antiseptic cotton used for this purpose is best soaked in a solution of water 100, alcohol 20, and copper sulphate 3, then dried slowly.

This brief plea for the physician's clinical laboratory is prompted by an earnest desire for its adoption by the whole profession, and if I may convince them that there is no obstacle in the way, my object has been fulfilled.

THE DOCTOR OF TO-DAY.

By Thos. Ross, M.D., Sacramento, Cal.

Read before the California Northern District Medical Society.

This is a comprehensive subject—a book of good size could be written on it. However, I do not propose to tire you with an exhaustive treatise, but will consider my subject briefly under the following heads:

1. The doctor of yesterday.
2. The necessary requirements of the doctor of to-day.
3. The impositions practised on the doctor.
4. The difficulties he has to encounter.
5. His services unappreciated by the public.

6. Good things said of the doctor by eminent men.

Much that I will say will doubtless be a repetition of what has been better said before.

The Doctor of Yesterday.—At a time not very remote the people did not require the physician to be well informed on subjects that did not relate to medicine, nor were they particular about the manner in which he conducted himself; if he, in their estimation, was a good doctor that was all that was required of him. Was he profane? His profanity, even in the sacred presence of death, while it shocked the family, was overlooked. Was he careless in meeting his obligations? He was excused by saying that it was a peculiarity of the doctor. Did he worship at the shrine of Bacchus? Then people would excuse him by saying that "he was a better doctor than any of them."

The doctor of yesterday had comparatively few remedies. Calomel, opium, jalap, tartar emetic, quinine, aconite, and digitalis being his familiar weapons, venesection belonging rather to an antecedent period.

The doctor of yesterday acquired astonishing dexterity in manipulating these remedies, according to the therapeutic effect he desired to secure. He gave tartarated antimony in large doses for an emetic—in small doses for an expectorant. He prescribed it as a ferbifuge in acute inflammations as pneumonia and inflammatory fevers. He used it as a sedative, a diuretic and a diaphoretic in local inflammations, and combined it with opium for the cure of a host of diseases. Externally he used it as a rubifacient and counter irritant. He knew nothing of the serums of to-day, nor of the numerous hypnotics and the thousand and one proprietary remedies. By the intelligent use of these remedies he successfully combated disease.

"When I was young," said Jonathan Gray,
"If a fellow took physic he knew it, you bet.
It would cramp him all up in such a colicy way,
And, good God! what a twisting his insides would get!
But the pills in use nowadays by sensible folks
Are as easy to take and as pleasant as jokes."

The Necessary Requirements of the Doctor of To-Day.—Much more—very much more--is required of the doctor of to-day. He must have a good physical organization. He must have a good preliminary education before entering upon the study of medicine. In the near future a classical education will be required in all our best medical colleges. He must attend at least a four years' course of medical instruction in a college of good standing. After graduation he should spend a year—better, two—in a hospital to gain practical experience in the treatment of disease, and to acquire the *technique* necessary in surgical practice.

The doctor of to-day, to be successful, must not only be well grounded in professional knowledge, but must also be a gentleman in the true sense of the term. His morals must be unimpeachable. The doctor of loose morals, even though he is possessed of the highest medical ability, is not trusted.

He must be prompt in responding to the calls of the sick; prompt in meeting his pecuniary obligations. He must be temperate. He must not be profane. He must also be courteous, kind, and considerate of others. The doctors of to-day should not indulge in hard feelings, ungenerous criticisms, or petty jealousies among themselves. Such indulgence makes our work harder, our lives less pleasant, and restricts our opportunities of helping each other. "If we only knew and could realize how much more we could gain by being tolerant rather than critical, courteous and friendly rather than distrustful, we would make great efforts toward becoming always and everywhere gentlemen. The true gentleman remembers that he himself, as well as his brother men, are imperfect beings."

The old doctor who has an established practice should be considerate and eminently fair to the young graduate who is just starting on his life's work, always remembering the struggle he himself had at the same period of his career. I often wonder that so few young doctors are driven into irregular lines of practice during the first few years of their work by the neglect and seeming disrespect shown them by many of their seniors in the profession. Here, as elsewhere, the golden rule should prevail. No doctor's reputation gives him the privilege of being careless of the young doctor's rights.

A physician is sometimes accused of the maltreatment of a patient, and another doctor is consulted in relation to the case, who too often does not hesitate to give an opinion in accordance with the opinions expressed by the patient. This conduct invites the contempt of all honorable physicians, and is infamous and cowardly.

The people require that the doctor of to-day should converse intelligently on the general news of the day, and on any subject that may be introduced in ordinary conversation. There is nothing that handicaps a physician more than poor orthography—not that a knowledge of spelling will make him a better physician, but the lack of that knowledge indicates other deficiences which plainly show that he has not the higher education essential at this day.

After the doctor of to-day has acquired a good preliminary education; has been faithful and diligent in his medical studies; has secured his degree of M. D., and has had a good hospital training, his requirements are not yet complete. He needs the necessary outfit and proper equipments for the successful practice of the profession of his choice. Thousands of dollars could be profitably expended upon a library, medical and scientific, and in surgical, obstetrical and gynecological instruments.

The essentials required of the doctor of to-day are greater than ever before. The demand for a higher, general and medical education is imperative. He must study harder, work harder, be more on the alert, and be more skilful than the doctor of yesterday; and the prospect of his receiving a reasonable return for his long, faithful, and arduous courses of study is becoming, with each passing year, more remote.

Impositions Practised on the Doctor of To-day.—No other profession or class of men have such impositions to bear at the hands of the public as the doctor of to-day. As examples, there are: Compulsory attendance in courts of law without remuneration, and the forced reports of births, deaths and contagious diseases without compensation. The State, the people, and the life insurance companies impose on the doctor.

The State demands that the doctor give expert testimony in courts of law gratuitously If the doctor, smarting under a strong sense of the injustice practised on him, refuses to testify without remuneration, the presiding judge promptly commits him to jail for contempt of court. This was the fate of Dr. W. H. Mays, of San Francisco, a few years ago.

The doctor does not wish to evade any of the duties incumbent on him as a citizen. He willingly complies with all the obligations of a citizen; he conforms to the law of the land; he pays his taxes; he bears without a murmur his portion of the common burden, but when services of a special character are demanded of him, the ability to perform which involve special training, and for the rendering of which he receives nothing, the law very clearly oversteps its prerogative.

Vital statistics should be collected, but why should the labor be placed upon the physician under the penalty of a heavy fine for neglect? The compulsory reporting of births without compensation is clearly an imposition on the doctor. Parents should report births and give notice of contagious diseases. They are the parties most directly interested. Many births occur without professional attendance, not even a midwife being present. Therefore, when parents are not compelled to report births the records will be incomplete and necessarily worthless.

What moral right has the physician to report an illegitimate birth, and thus forever blast the fair name and reputation of an innocent and inexperienced young girl who fell at a period of her life when passion is the strongest and the ability to control it the weakest? This is clearly an imposition on the profession, and the State should not demand it.

In reporting contagious diseases the doctor may lose some of his best patrons. The doctor has no right, and the State should not require him, to act as a detective and perhaps cause the forcible removal of a patient to a pest-house. It is right and proper that a record of all births should be systematically kept and that contagious diseases should be reported to the proper authority, but why saddle it on the doctor? After he makes a diagnosis, the responsibility of reporting it to the health authorities should devolve upon the parents, kinsfolk, lodging-house or hotel-keeper.

The doctor occasionally receives "confidential" letters from insurance companies, requiring a gratuitous professional opinion concerning an applicant for insurance whom he attended in an attack of sickness. It is both presumptuous and aggressive for insurance companies to make such a request, and it would often be a betrayal of the confidence reposed in the doctor by his patient to furnish the opinion. When a patient whose life was insured for thousands of dollars dies the physician is asked to fill out a certificate of death, giving a history of the sickness of the deceased, his habits, cause of death, etc., for which services the doctor receives nothing. This is certainly a palpable imposition. The doctor should not turn his energies into unremunerative and thankless work.

The Difficulties the Doctor of To-day Has to Encounter.—A very large proportion of practice is lost to the profession from the fact that almost all druggists prescribe. In these days of "cut rates" among druggists, counter prescribing, instead of diminishing, is largely increasing. Hospitals and dispensaries also, both general and special, draw largely on the rightful profits of the profession. It is estimated that more than one-third of the persons who receive gratuitous medical services from dispensaries are in a position to pay a reasonable fee. There are two chief difficulties with which a doctor has to contend: the ever-increasing cost of living and the ever-increasing difficulty of collecting his bills. He is expected to be generous in all pecuniary matters and to donate generously to all charities. To keep in touch with the rapid advancement of medicine and surgery, he must spend large sums in the purchase of books and periodicals on general and medical literature and the instruments necessary to prosecute his work.

It is becoming a fixed belief in the popular mind that there is no harm or nothing mean in shirking the payment of the doctor's bill. This is in a great measure due to the ease with which medical services can be had for nothing, and which therefore ought to be paid for at that price. With prevailing conditions, the doctor who can collect *one-half* of what is due him is much more fortunate than the majority of his brethren.

> "Three faces wears the doctor; when first sought
> *An angel's*, and *a god's* the cure half wrought;
> But when, that cure complete, he seeks his fee,
> *Satan's* vile looks then are less terrible than he."

The Doctor's Services Unappreciated by the People.—The doctor of to-day often gives his talent, time and experience for the good of the public and to individuals gratuitously. Too often his services are not appreciated by those upon whom so much labor has been bestowed. Sleep, meals, family obligations and social recreation must be sacrificed to the patient, and the doctor must either wait for his fee or never get it. The doctor is considered to have no need of money; he rides about for exercise and practises for philanthropy. The doctor's services are always more appreciated when paid for. Patients who will not pay are always unappreciative, more exacting, and often abusive.

The lawyer's services are appreciated and always paid. I will illustrate the difference in the appreciation of the doctor's and of the lawyer's services by narrating an incident:

When the late multi-millionaire, J. W. Mackay, was shot by a would-be assassin, two doctors, who extracted the bullet and probably saved his life, charged him $12,500 for their services. After Mackay's recovery, he asked the Probate Court for permission to distribute the property and to close an estate for which he was executor. Among the items of expense which he incurred as executor was attorney's fees of $26,160 for services rendered. He refused to pay the physicians $12,500 for services which required more skill and judgment and a thousand times more responsibility on their part than was required of the attorney. The lawyer's charge was promptly allowed. It elicited no comment, while the doctor's fee for services of greater responsibility, value and importance was the talk of the town.

Why is it that the value of the doctor's services are so much underrated and the value of the lawyer's services so highly appreciated? One prominent reason is that doctors are continually giving medical services free, even to those who can pay for them. Lawyers never do; therefore the lawyer's services are held in high estimation and the doctor's are underrated. We value most what costs us most.

The great possibilities in the future development of medicine, surgery and sanitation, in the evolution of the microbic etiology of disease, in the scientific application of serums yet unknown in the treatment of all diseases, and in the development of preventive medicine—will all make the doctor of to-morrow differ more widely from the doctor of to-day than the latter does from the doctor of yesterday.

Good Things Said of the Doctor by Eminent Men.—Ex-President Cleveland, Gladstone, the "grand old man," ex-Minister Bayard and many other eminent and prominent men frequently expressed their high appreciation of the profession. Gladstone predicted that medicine is destined to outstrip its haughty competitors—law and theology.

The Rev. Dr. Talmage, in one of his sermons, said: "Bless the doctors. So far as I know them, physicians do not pretend to be competent or all-wise. Like those of us in other professions and occupations, I suppose they sometimes make mistakes, but the time we spend in sarcastic flings at their Christ-like and magnificent calling, we had better spend in thanking God for what they accomplish. Better not be too hard on the doctors. Sooner than you expect you will be sending for them, and between you and the King of Terrors there will be nothing but one of their prescriptions. They stand to-day as a profession fighting back whole armies of cancers, pneumonias, diphtheria and congestions of the brain, liver and lungs. They do more missionary work than any class of men in the country, and upon them will come the blessing of the Great Physician, as he says: 'I was sick and ye visited me.' When the last ailment of the body is cured, and the last attack on the children's cradle has been discomfited and the last broken bone of workmen falling from the house scaffolding shall be set, then it will be time enough to deride the medical profession."

The Rev. August Jessup of Norfolk says, in *The Nineteenth Century*: "The doctor of to-day who has passed through educational work, which makes him a thoroughly competent physician, has gained thereby a knowledge which cannot fail to make him a man of value in any community, and of importance in all communities which are civilized and intelligent. The doctor of to-day can rarely succeed unless he has merit. In olden times it was largely a question of bearing and a wise look, peculiarities of dress, fashion and manner, which took the people. Now it is expected that he show knowledge and skill or else acknowledge that the problem is too great for him. There is fear that the doctor of to-day, in his ardor to make money, is liable to be tainted with commercialism, but as long as the physician is competent and honest, his desire to make money will not lower his professional standing."

The Dean of Norwich, England, in one of his sermons, said: "Nor can I, nor will I, be silent about the wrongs to which scores of medical men are subject. I refer to the startling contrast there is between the inexorable demands which society makes on medical men and the elasticity of the social conscience with respect to their remuneration. I have known cases where medical men are summoned at all hours and at all seasons of the year. Their bills are presented with timidity, if not anxiety, and they are received sometimes with amazement, sometimes with indignation, and sometimes they are relegated to oblivion. Nor are cases unknown where the righteous demand for work done is met by calling in another practitioner, he in turn to suffer as his brother did before him.

"I cannot permit myself to imagine that I address any such wrongdoer here to-day. But if I do, then, in my Master's name, I entreat you to remember that the medical men of this nation are the highest type of their class in the world. They are entrusted with the secrets of domestic life, they have all our liabilities with special liabilities of their own. They frequently die as martyrs to science, to suffering, to sympathy and to destitution.

"Believing this, my plea is that every unpaid medical bill be discharged generously, gratefully, cheerfully, and that whatever account must be deferred in payment the last bill to be deferred is the account of him, who is the human agent, that brought us into the world, enables us to continue our work in life, and many a time lays down his own in endeavoring to baffle death."

528½ J street.

ACUTE ANGIO-NEUROTIC EDEMA.

By Bertram Stone, M.D., Crescent City, California.

This disease, developing in early childhood and especially in infancy, is sufficiently uncommon to render its occurrence a matter of interest. I therefore think the following case is worthy of record.

The patient to which this article refers was first seen November 13th, 1897. Age 14 months, female, weight 24 pounds, fat, playful and good natured, parents stating that she never cried nor was cross unless when hurt. She was well developed at birth, and, apparently at least, perfectly normal, and never until the first appearance of edema giving the slightest indication of being in other than the best of health. She had been nursed at the breast until 9 months old, when she was weaned without any difficulty. The appetite was good and sleep sound and natural. In fact the child seemed to be enjoying herself to the best of her ability and apparently suffered no inconvenience from the edema except the slight stiffness of the fingers resulting therefrom.

The parents were fairly well to do, both strong; mother somewhat hysterical, always worrying for fear something might happen to the children. Mother has been subject to short attacks of hysterical paralyses, lasting for a few hours, and occurring only during pregnancy. Her hysterical symptoms did not appear until after the birth of the first child, but have increased with each succeeding pregnancy. Possibly an illustration of a couple of calls I have had and the reasons therefor may more correctly show her condition in regard to the children than a description of the symptoms.

I was called out one night and found her in great excitement and very badly frightened, the baby sitting up in bed, laughing and playing and having a good time. The mother told me that the baby had eaten something that she thought would make it sick, and for fear it would, she had given it several doses of syrup of ipecac, to make it vomit up the offending material, but after each dose the child seemed brighter and did not exhibit the slightest desire to vomit, thereby causing great alarm.

At another time, when called, I found the mother in great agony of mind, thinking that one of the children had swallowed a pin which had been lying on the floor where the baby was playing, but which could not now be found. The baby was sitting on the floor and seemed to wonder what all the fuss was about, but otherwise showed no symptoms of anything unusual. I therefore undertook to cure the mother, which was very effectively done by dropping another pin on the floor and letting her find it; the baby also recovered almost immediately.

There were two other children in the family, both extremely healthy, although one of them (the second) had a history of having had slight attacks of edema of the hands and feet when about 2 years old, which lasted for about 3 or 4 weeks, then disappearing and never recurring.

About November 8th, 1897, the parents began to notice that in the mornings the baby's hands and feet would be swollen, cold and bluish. As this disappeared after it was up and dressed about half an hour, they ascribed it to cold and for a couple of nights sat up and kept a fire, but as it reappeared each morning and was gradually getting worse, I was called on the 13th. I found both hands, wrists, feet, ankles and the lower third of the legs edematous, glossy, white and pitting deeply on pressure; the "pits" filling up slowly. The temperature was normal, there was no evidence of lung or heart disease, the urine was slightly diminished in amount, but contained no abnormal constituents; bowels somewhat constipated.

I prescribed rhamnus purschiana, fruit and dietetic regimen for the constipation and tinct. digitalis, m $\frac{1}{5}$ and pot. citras, gr. i, every 4 hours for the edema. The edema reappeared each morning at the same time and in about the same degree for 3 or 4 days, after which it gradually lessened in amount so that in about 10 days it had disappeared.

On January 2d, 1898, I was again called and found the child in practically the same condition as when first seen, except that there was no constipation; urine normal in amount, but slightly offensive, for which I prescribed salol in iss gr. doses t.i.d. This was omitted in about a week, as the urine was no longer offensive. I also prescribed tinct. digitalis, m $\frac{1}{4}$, pepto-mangan (Gude) m xx, and liq. pot. arsen., m $\frac{1}{10}$ t.i.d.

The child continued about as usual for 2 or 3 days, the edema appearing each morning and disappearing within an hour after awakening. On January 5th I noticed that the right cheek was very much flushed in addition to the regular edema of the feet and hands, but this disappeared until the afternoon, when, following a nap, the feet and hands were found swollen as in the morning, except that the right foot and hand were swollen more than the left, and, in addition, the right cheek was quite edematous, the right eye being nearly closed. This entirely disappeared in about 30 minutes.

Each morning thereafter for about a week the edema reappeared, involving both hands, feet and cheeks, the right side being more involved than the left. It also became somewhat irregular in its appearance, sometimes beginning at 8 or 11 A. M., or in the afternoon, but seldom occurring more than once in the 24 hours. The attacks at this time came on whether the child was asleep or awake, resting or playing, but never lasted more than an hour.

After the first week the edema began to lessen in amount during each attack, so that in about 2 weeks it had only slight edema every other day or so. The tincture of digitalis was omitted after having been used about two weeks and treatment confined to pepto-mangan and arsenic.

On January 22d I was called in the afternoon and found the child's hands slightly swollen and the abdomen greatly distended, but without any evidences of discomfort. The percussion note was tympanitic all over the abdomen, walls not edematous and no evidence that I could discover of any collection of fluid in the abdominal cavity; the distension disappeared in about 45 minutes without the eructation or passage of any gas, and the difference in measurement around the abdomen at all points, during and after the attack, was 3½ inches.

This distension of the abdominal cavity, with slight edema of the hands, but without involving either feet or cheeks, occurred about every 3 days for 2 weeks, since when no edema or swelling in any locality has appeared.

The fact that the first child, born before the mother developed any symptoms of hysteria, has never been affected, and that the second child, born after the mother had developed a slight degree of hysteria, was subject to a mild attack of the edema, and that the third child has had the disease, or condition, in a more aggravated form, the mother's hysteria having increased in a decided manner after the birth of the second child, leads me to think there can be no doubt that the etiology in this case is that the neurotic condition of the mother has been transmitted to the two children, giving rise to a vaso-motor derangement, causing angio-neurotic edema.

DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By Wallace A. Briggs, M.D., Sacramento, Cal., and

Wm. Fitch Cheney, B.A., M.D., Adjunct to the Chair of Obstetrics and Diseases of Women and Children, Cooper Medical College, San Francisco, Cal.

Tetany in Infants.—Dr. Adams makes the following statements in regard to the treatment by thyroid glands: (1) The administration of the thyroid gland is extremely useful in the treatment of idiopathic tetany in children, as it always diminishes the intensity and frequency of the attack and shortens the duration of the disease; it also hastens the arrival of the latent period which precedes recovery. (2) The treatment is well tolerated by children. (3) The organic changes, the digestive functions, and diuresis are not notably influenced by this treatment. (4) The circulatory and respiratory functions are accomplished normally during this treatment. (5) In very young children, on account of their perfect tolerance, it is useful to administer the thyroid gland, raw or slightly cooked, internally. (6) With the exception of certain peculiar cases, it is not necessary to suspend the treatment from time to time. (7) The daily dose is from 30 to 60 grains. (8) This treatment is not opposed to the symptomatic treatment, as it does not present any incompatibility with the methods ordinarily employed.—*American Journal of Obstetrics and Diseases of Women*, June, 1898.

Intravenous Injections of Normal Saline Solution.—DR. HORACE I. HAWKS urges the importance of the following points: (1) Proper preparation before an exhausting operation, by systematic stimulation or by intravenous injection. (2) Intravenous injections of 2 quarts or more of normal saline solution after dangerous hemorrhage. (3) Intravenous injection for bad shock, using fully 3 pints or more of normal saline solution. (4) Intravenous injection for remarkably feeble pulse after, or even before, operation (using from 1 to 3 pints). (5) Intravenous injection for septicemia, especially when an operation is decided upon. Use from 1 to 2 pints, and repeat if bad symptoms return.—*American Gynecological and Obstetrical Journal.*

Perforation of Uterus by Sound and Curette.—ROSENFELD (*Centralbl. f. Gynäk.*), reports a case of unusual importance, as the injury was made plain to the naked eye by operation. The patient was 32, with flabby muscles; the last pregnancy ended 18 months before the operation, which was to cure complete rupture of the perineum and prolapsus uteri, from which she had long suffered. Before the operation, by Prochownick, a sound was passed cautiously into the uterus, and suddenly slipped in for over 5 inches; no pain followed. Next day Prochownick began by using a blunt curette. It also passed in suddenly over 6 inches, going into and beyond the uterine cavity. Partial amputation of the cervix was performed, as well as repair of the perineum. In the course of somewhat complicated incisions (Mackenrodt's operation), the body of the uterus was rotated into the vagina. The perforation lay in the posterior wall of the uterus, a little behind the fundus. It was slit-like, a quarter of an inch long, and its edges were almost clean cut. There was no evidence of peritoneal irritation, but a thimbleful of bloody serum, without clot, escaped from Douglas' pouch. The edges of the wound were carefully united with catgut. No ill consequences seem to have followed. Rosenfeld calls attention to Beuttner, Courant, and Odebrecht's three cases of instrumental perforation of the uterus, all reported in the 1897 volume of the *Centralblatt für Gynäkologie*. *British Medical Journal.*

Menorrhagia and Metrorrhagia.—DR. W. L. DUNNING summarizes a paper on this subject: Menorrhagia and metrorrhagia are but symptoms of some pathological condition, hence it is illogical to institute treatment until the underlying cause is determined. In the case of menorrhagia in virgins, tonic and hygienic measures suffice, as a rule. If menorrhagia is present it calls for an investigation. First, inflammatory diseases of the uterus and appendages are in most cases septic or suppurative, and, therefore, as a rule, the treatment is surgical. Second, displacements of the uterus must be corrected before the hemorrhage can be controlled, which means either a pessary skilfully applied or a surgical operation. Third, in the various diseases of the endometrium, as fungous degeneration, polypi, adenoma, retained products of conception, etc., a curettage is indicated. The dangers of this procedure from sepsis, perforating the uterus, etc., are such that it can be done thoroughly and safely only by those properly trained in surgical work. Fourth, fibrous tumors, when symptoms are annoying, may usually be enucleated without sacrificing the uterus.

This applies especially to those of small and medium size, curetting as a palliative measure. Fifth, malignant disease, predominantly a surgical disease, hysterectomy, provided the disease is limited to the uterus, or can be completely removed, is the only rational treatment; any other would be little short of malpractice. Sixth, as a rule, cases of abortion require curettage to secure the patient against hemorrhage and sepsis. In threatened abortion, naturally we would endeavor to preserve the life of the fetus, unless the patient was septic, when, after a consultation, operation is deemed necessary—a curetting. Seventh, extra-uterine pregnancy calls for surgical operation as soon as discovered. It does not necessarily mean the sacrifice of the uterus. It may often be removed through the vagina. Vaginal incision and drainage often suffice. In case of alarming hemorrhage from the uterus from whatever cause, packing the uterus with sterilized gauze will control it perfectly, but must be done after all the precautions against sepsis used in any surgical operation. The gauze may be removed in 24 hours.—*American Gynecological and Obstetrical Journal.*

SURGERY AND ANATOMY.

By T. W. Huntington, B.A., M.D., Surgeon Southern Pacific Company's Hospital, Sacramento, Cal., and Geo. B. Somers, M.D., San Francisco, Cal.

The Abdominal Incision.—The linea alba is no longer the site of election for an incision which must be at or near the median line, for surgeons are coming to believe that an incision through one of the recti is followed by firmer union, partly on account of the greater thickness of the abdominal wall and partly on account of the contracting power of the muscle. An incision through the linea alba, when healed, protects against hernia only by the formation of cicatricial tissue, and the tendency of such tissue to stretch and atrophy is too well known to need comment. If the incision goes through muscular tissue in the direction of its fibers, healing takes place by the same process of cicatrization, but the new cicatricial tissue is supported by muscular tissue, which gives the abdominal wall much greater thickness, and by its contractility is always tending to prevent stretching of the tender cicatrix. An accurate union of the peritoneal edges is of more importance in reducing the area to which the viscera may become adherent, than in adding any real strength to the healed wound.—*Medical Record.*

Cancer of the Rectum.—Kraske has published his experiences of the operation which he proposed in 1885. In speaking of the *technique* he describes his latest modifications as follows: The thorough evacuation of the contents of the intestines by cathartics and enemata previous to operation—often necessitating three or four weeks of treatment—is very important, and the author thinks that the failure to properly carry out this preparation is responsible for some of his fatal cases. In operating, the patient is placed on the right side, and the incision now adopted begins at the level of the middle of the sacrum, two or three fingers' breadth to the left of the median line, and runs slightly concave to the left, to the coccyx, running from this point in the median line as far as a finger's breadth above the anus. The soft parts and the insertion of the sacro-iliac ligaments are divided, and after cutting through the loose fat in the ischio-rectal fossa, the levator ani and coccygeus are divided close to the sacrum and coccyx. Resection of a portion of the sacrum is now necessary, and may be performed with chisel, bone-forceps, or chain-saw, after separation of the soft parts, in a line concave inward and downward, running from the third left sacral foramen to and around the fourth foramen to the lower angle of the sacrum. The resection of the cancer should begin with division of the bowel below the tumor by opening it transversely, and sutures are placed on the upper cut surface for traction purposes. The patient is then brought into the lithotomy position and the dissection proceeded with. Sometimes the peritoneum can be peeled off the bowel; but if necessary it must be opened, two fingers introduced, the gut pulled down and divided, and the sacral glands removed. Suture of the peritoneum is not to be thought of unless the opening is a very small one. After trying various methods of suturing the cut ends of the bowel, the author has returned to his early method of immediate circular suture, as a successful result is perfectly possible, if a sufficiently careful preliminary treatment has been carried out, and if the bowels are kept constipated for eight or ten days after operation.—*Bristol Medico-Chirurgical Journal*, June, 1898.

Hernia in Children.—In an article by DR. CHARLES H. HAMILTON, the following conclusions are arrived at: (1) Ordinary inguinal or umbilical hernia may be treated with trusses from early infancy. (2) The great majority of such hernias is relieved by mechanical treatment. (3) There remains, however, a certain proportion of cases of inguinal hernia in which from various causes, a cure cannot be accomplished by mechanical treatment. (4) Such cases are suitable for cure by radical operation, which should not be performed earlier than the fourth year. (5) In cases of strangulation, operation for radical cure should be performed with that for the relief of strangulation exactly as in adults, no matter what the age of the child may be —*Columbus Medical Journal*, June 21, 1898.

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By WM. ELLERY BRIGGS, M.D., Sacramento, Cal.

The Galvanic Current for the Treatment of Pterygium.—DR. HORACE STARKEY reports the results that he has obtained from the use of the galvanic current in the treatment of pterygium after several years' experience to be very favorable. The method of using the current is as follows: Any source of electricity may be used, provided it produces a smooth, constant and certain current of sufficient electro-motive force to overcome the resistance of the body, and provided, further, that it can be so controlled as to deliver a current of from 1 to 5 milliamperes. The current should be under perfect control, and should be accurately measured by a reliable milliamperemeter, which should measure fractions below 5 milliamperes. The current at the terminals should be tested before every operation. The apparatus being in good condition, the eye to be operated upon should be cocainized and a fine platinum needle, connected with the positive pole of the battery, should be introduced through the conjunctiva near the apex of the growth, and passed close to the sclera through and beneath the pterygium, and at a right angle to the direction of the growth. The circuit may now be completed by having the patient press a well wetted sponge connected with the negative pole against the palm of the hand. A current of 1, 2 or 3 milliamperes should be turned on for 1 or 2 minutes. A second puncture should be made in a line parallel with the first and two millimeters distant, and, if thought desirable, a third may be made. The immediate effect seen is the formation of gas, which appears in bubbles upon the surface at the points of entrance and exit of the needle, which causes some puffiness of the conjunctiva along the line of puncture. Considerable hyperemia of the conjunctiva is occasioned, but large vessels which the needle comes in contact with are more or less collapsed. The pain is insignificant, and while there is some feeling of irritation and fulness in the eye for a few days, it is not sufficient to prevent the patient going about his usual occupation. The treatment can be repeated in four or five days, or it may be delayed as many weeks, at the convenience of the physician or patient. The advantages of this method are: First, it avoids any loss of tissue; second, it is painless; third, it does not incapacitate the patient: fourth, it stops the progress of pterygia seen in the early stages. It is not advised except as a palliative in broad, fleshy, pterygia or those encroaching much on the corner. The operation is painless under cocaine. At the first treatment a small current should be used that the irritability of the eye can be noted.—*Journal of the American Medical Association.*

DERMATOLOGY, SYPHILIS AND VENEREAL DISEASES.

Lupus Erythematosus.—In a discussion on the nature and treatment of this disease in the Section on Dermatology of the British Medical Association, Dr. C. P. M. Boeck, of Christiana, said: In my opinion it is clear that lupus erythematosus is one of the links in the whole series of affections of the skin, which all point back to tuberculosis as their common source of origin. Such a group was, it will be remembered, formed by M. Hallopeau at the Dermatological Congress in London two years ago. Dr. Boeck concludes as follows: (1) Lupus erythematosus is always and in all its forms an eruptive inflammatory disease of which the localizations are determined by the vasomotor centers of the skin. It is never merely a local process. (2) Local irritation by heat, cold, and drugs plays only an accidental and determining part by bringing the vasomotor system into play. (3) In view of the very frequent coincidence with tuberculosis it must be admitted that the latter plays an important part in the etiology of the skin affection, and is probably the real and essential cause of it. The fact that a connection may be traced between all forms of lupus erythematosus and certain affections, the dependence of which on tubercolosis is beyond doubt, is an evidence for the tuberculosis origin of lupus erythematosus. (4) As the tubercle bacillus cannot be proved to be present in the inflamed skin, it is probable that the inflammation is brought about through the toxins of the bacillus which act in the first place on the vasomotor centers, and in the second place on the parts of the skin in which the vasomotor disturbances are set up. (5) The main anatomico-pathological changes are vasomotor dilatation of the blood vessels, secondary poisoning of the tissue cells, and inflammation—the whole resulting very often in atrophy, rarely in necrosis.

Dr. P. G. Unna, of Hamburg, says he must confess that even the arguments of Boeck and Hallopeau in favor of the tuberculous nature of lupus erythematosus have failed to convince him. He adds that if the etiology fails to afford a firm standpoint for therapeutical methods, we have still the pathological histology to give us a firm foundation. The histology of lupus erythematosus has recently been so clearly investigated that it now gives us as clear a definition of the disease as clinical observation has ever done. In concluding an exhaustive review of the various methods of treatment, he says: I should like, in summing up what I have said, to draw up a short scheme of treatment for the practical physician in the light of my own experience during the last few years. From this scheme I exclude all perilous mutilating remedies or those which require special personal skill. The first question after the diagnosis of lupus erythematosus is to ask whether we have to do with an irritable or an indolent case. In general, the irritable cases are those on the cheeks, nose, eyelids, ears, the backs of the hands, especially if the patches are only slightly hyperkeratotic, swollen, and of a dark red color. The indolent cases are those on the scalp, the lateral parts of the face and neck and on the rest of the body. Next to the seat of the disease, the personal factor plays an important part, partly because the vasamotor paresis of the vessels of the skin begins in each individual at a different point of irritation, and partly because each individual may possess a different idiosyncrasy in his tolerance of the various remedies which are capable of producing extraordinary irritations. As we cannot, however, know beforehand whether an apparently indolent case may or may not react too strongly under a given treatment, the general rule should be to begin the treatment always with one of the mild remedies mentioned, and not to proceed to stronger ones till the former have proved not strong enough. Therefore we can never be wrong if we commence with nothing stronger than lead water dressing, but we may be wrong if without a cautious exploration of the field we begin at once with a strong ointment of pyrogallol. A cautious treatment may, therefore, for instance, begin with bandages of lead water at night, or the application of a powder bag, and during the day with a dusting of pulvis cuticolor, or a zinc sulphur paste, with ichthyol or resorcin eventually, to be rubbed in, or a gelanthum with ichthyol or soft soap, or with both may be prescribed for the night. Under this treatment the inflammation subsides, and it will be possible to distinguish the indolent from the irritable patches. If the latter show signs of fixed edema, collodion with soap or ichthyol may be applied, while in cases of darker redness it will be advisable to use the microcautery. In addition to these applications an external dressing may be used at night consisting of lead water, ichthyol, or very weak caustic potash (1 in 10,000) solution. On the other hand, the indolent patches require more vigorous treatment, as pyraloxin paste and the soap treatment, which may easily be modified in strength and quality by using the lather of soft soap, salve soap, or mercurial soft soap. These patches are best covered immediately after such a treatment by a wet bandage, and zinc oxide plaster mull or mercury plaster mull. Strongly hyperkeratotic patches require before the soap treatment a peeling with salicylic soap plaster mull. The patches on the scalp should be treated thoroughly with soft soap and then covered with pyraloxin ointment. In cases of anemia, flushings of the face, or where digestion is disturbed, an appropriate plan is to give ichthyol internally during the whole course of the treatment. Such a treatment, it is true, does not always work *cito* but *tuto*, and comparatively also *jucunde*.

Dr. Alfred Eddowes, of London, said he had taken material from a patch of the disease which he thought might prove to be tuberculous, because of the close connection which the person had had with a tuberculous family, and had it injected into guinea pigs in the pathological laboratory of St. Bartholomew's Hospital. The result was negative. As to treatment, he considered that calamine and lead lotion (half and half) as a daily application and a solution of sodium ethylate for use by the surgeon left little to be desired. Acid nitrate of mercury and scarification were also of great service. Quinine often improved the condition, but its results did not seem to be permanent.

Dr. Morgan Dockrell, of London, said he could not understand how such a condition as described by Professor Boeck should exist in Christiania, since undoubtedly the experience in Great Britain was that the disease was not tuberculous. Of course, from time to time a lupus erythematosus was met with on a tuberculous soil, just as was the case with other diseases, but this was accidental, and was quite provided for by the variety described by Hebra. He had hoped that the term "lupus erythematosus" would have been expunged in favor of ulcerative erythema, and, indeed, he failed to see why it should not, as far as the British School of Dermatology was concerned, leaving the old term for those countries where it could be used intelligibly.

Dr. H. Radcliffe Crocker, of London said that for the last twenty years he had been on the look out for evidence of the connection between lupus erythematosus and tubercle, and with one exception there was a remarkable paucity of facts in this direction. The exception was that a considerable proportion of patients with lupus erythematosus had a history of phthisis in their family, though tuberculosis in themselves was certainly rare. Since no tubercle bacilli had been found in the skin lesions of this form of lupus, it had been suggested that it might be a tuberculous toxin, which was the pathogenic factor. Against this it might be said that the experiment had been made on a large scale since of the many hundreds of phthisical patients subjected to Koch's tuberculin treatment, no instance of lupus erythematosus had been recorded as a consequence. Moreover, the age of the patients, and the symmetry, localization, and general behavior of the lesions were quite unlike any recognized form of tuberculosis of the skin. On the other hand, there was a good deal to be said in favor of vasomotor nerve disturbance as a factor, and visceral lesions, uterine, gastro-intestinal, etc., were not uncommon in these patients. A secondary microbe invasion of the diseased area was also probable, and must be taken into account in the treatment. He had found salicin very beneficial in the erythematous cases, though he had been obliged to consult the wishes of the patient for local applications, and give soothing lotions, such as that of calamine.

Dr. James C. Johnston, of New York, observed that, at the recent discussion on this subject before the American Dermatological Association, Dr. Robinson, of New York, expressed the opinion that the disease was primarily a vasomotor disturbance due to toxin poisoning, and resulting in a condition somewhat analogous to the infective granulomata. The general opinion of the causal connection, in spite of evidence adduced, was that the case was not proven. With regard to treatment, Dr White, of Boston, had expressed the opinion that little was to be expected from treatment, in which view many of those who took part in the discussion mentioned agreed. An interesting point in regard to pathology was the suggestion of Dr Wm. H. Welch, that the tubercle bacillus might be present in zoögleic form.

Dr. Maar, of Copenhagen, said that Professor Finsen, of Copenhagen, had employed his treatment of lupus vulgaris by the chemical rays of electric light or sunlight (by exclusion of the heat rays), also in lupus erythematosus. The few cases in which he had made this experiment had recovered, but only after persevering for a very long time. He thought that the possibility of curing lupus erythematosus by this same treatment (but applied for longer time) might have some interest in connection with the theory of a relationship between lupus vulgaris and lupus erythematosus.

Dr. W. Allan Jamieson said that the forcible statements of Professor Boeck proved the view of a tuberculous element in lupus erythematosus was not dead. This view was further supported by the admission of Dr. Crocker that it might be caused by a hypothetical toxin. The most important deduction from the observations of Dr. Unna was the emphasis he laid on the employment of mild remedies to the exclusion of caustics, which might occasion much harm. Dr. Crocker had said that it was difficult, if not impossible, to try internal remedies alone. There was a way in which this might be done; if the use of an external remedy were persisted in, which had been proved by sufficient trial to be inoperative in an individual case, any improvement which might result from an internal medicament used subsequently in conjunction might be put down to it. Dr. Johnston had represented the gloomy prognosis held by American dermatologists. It would be unfortunate were this accepted. But, though the disease was often obstinate, and any one remedy uncertain, yet many cases were cured, and years had elapsed without recurrence.

Professor Boeck, in replying, said that time and continued observation must prove or disapprove the observations and arguments set out in his opening paper. With regard to the prognosis of the disease, he said that he had many patients who were cured, and, as he believed, definitely cured, for he had followed them up for many years. As for the treatment, he agreed with Dr. Unna in every respect.—*British Medical Journal.*

MATERIA MEDICA AND THERAPEUTICS.

By Wm. Watt Kerr, M.A., M.B., C.M., Professor of Clinical Medicine, University of California, San Francisco.

Tetanus Treated by Antitoxin, Recovery.—The following case under the care of **Mr. Boyce Barrow**, of Liverpool, is reported in the *British Medical Journal:* E. C——, aged 21, a girl employed in housework, was admitted on December 4, 1896, complaining of inability to open her mouth properly, sore tongue, and stiffness in neck. It was elicited that when scrubbing a dirty floor four weeks previously a large splinter penetrated the skin of the right thumb near the base of the nail, and was not removed until a week before admission, having caused a good deal of pain and swelling. About this time her neck became stiff, and flexion of the head was painful. Symptoms became aggravated day by day, such as difficulty in opening the mouth, pain in the back and between the shoulders, and a clonic contraction of the masseters, which, causing her to bite her tongue, produced the pain, which was mainly instrumental in making her seek hospital relief. It was so severe that sleep was prevented for several nights previously, as dozing was followed by the tongue being bitten, which woke her up. For the relief of this symptom she had applied at another hospital a day or two before and been ordered a mouth wash. On admission the patient was dusky looking, with anxious expression and a marked tendency to risus sardonicus. The pulse was 120 and the temperature 100.2°. There was no perspiration. The terminal phalanx of the right thumb was much inflamed, edema and discoloration extending above it for 2 inches. She was unable to perform the following movements: (1) To separate jaws for more than a quarter of an inch. (2) To swallow, except with extreme difficulty. (3) To flex her head, which was maintained in a slightly extended position. (4) To move her tongue, which was apparently much swollen. (5) To walk, this being prevented by pain and stiffness in [illegible]. The following muscles were rigid and contracted: The masseters, temporals, sternomastoids, [illegible], trapezii, [illegible], and apparently all the muscles of the anterior abdominal wall, which was hard and board-like. Twenty c.cm. of tetanus antitoxin (prepared by the British Institute of Preventive Medicine) were injected under the skin of the anterior abdominal wall, and after a short interval amputation of the thumb was performed at the carpo-metacarpal joint, thus leaving a fair margin of apparently healthy tissue. She was then put to bed in a warm, quiet, isolated room (which was kept in semi-darkness) and ordered: (1) Valentine's meat juice, eggs, milk and brandy in small quantities by mouth. (2) Nutrient enemata and syrup of chloral ℥ss. 6 hourly. (3) Injection of antitoxin, 25 c.cm., every 12 hours, and the catheter to be passed twice daily. During the induction of anesthesia for the operation the patient was seized with a violent spasm, which lasted about a minute, during which the right arm became rigid, hand clenched, and head retracted. When the patient came round a similar seizure occurred, during which respiration became labored and stertorous, opisthotonos and trismus being well marked. On the first day after the operation the patient vomited several times, and the masseteric spasm, causing her to bite her tongue, occasioned much distress. Croton oil mij administered. On the second day another seizure occurred similar in all particulars to the former ones, delirium being present at night. On the third and fourth days, chloral, being distasteful, was discontinued, and bromidia in ʒj doses substituted. Improvement being apparent, the antitoxin injections were stopped, till on the fifth day she had two very violent spasms, when they were resumed. On the sixth day two slight convulsions took place. The hand was dressed and the wound found to have healed. From this time no more definite seizures occurred, and a gradual amelioration of symptoms commenced, though the girl did not leave the hospital for several weeks. A bacteriological examination of the splinter and tissues in which it had been imbedded yielded no trace of the tetanus bacillus Some points of interest in connection with the case appear to be: (1) The primary subjective symptoms of inability to refrain from biting the tongue, causing, as it did, the disease to be at first overlooked. (2) The marked manner in which the convulsive seizures commenced in the right upper extremity, close to the point of inoculation. (3) The absence of sweating notwithstanding the violence of the spasms and the occurrence of delirium, which is usually present in cases which end fatally.

MEDICINE AND PATHOLOGY.

By Albert Abrams, M.D., Professor of Pathology, Cooper Medical College, San Francisco.

Acromegaly.—Dr. W. J. Thompson, in reporting a case of this disease, and exhibiting patient, said: Since Marie, in 1886, first described acromegaly, little advance has been made as to its cause. It occurs more frequently in females than males, and in the former is associated with menstrual disturbance. It follows anemia, influenza, the exanthemata, rheumatism, syphilis, and traumatism; it frequently comes on without any cause, and occurs at all ages from 14 months to 70 years. The symptoms are now well known, viz: hypertrophy of the bones of the hands, feet, and lower part of extremities, the cranial and facial bones, with subcutaneous thickening, kyphosis of spine, enlargement of nose, ears, and lips, and optic disturbance. The pathology of acromegaly is still obscure. The enlargement of the bones is simply hypertrophy. What is the hypertrophy due to—a toxin or a neurosis? The thyroid gland is often hypertrophied, rarely the thymus. The pituary is constantly found affected—in about 90 per cent. of all cases enlarged and diseased, and in about 10 per cent. diseased but atrophied. The diseases embraced almost every form of tumor, viz: sarcoma, adenoma, glioma, etc.; hence, from the lesions of this body very little light is thrown on this disease. Similar changes are found in pituary bodies not clinically associated with acromegaly. The diseases it is likely to be confounded with are: (1) Myxedema. (2) Osteitis deformans of Paget (3) Hypertrophic pulmonary osteo-arthropathy. It runs a course of from 2 or 3 to 30 years, and is divided into the acute, the chronic, and the intermediate. Treatment unsatisfactory. Arsenic, iron, pituary, and thyroid extracts, etc.—nothing seems to have any specific effect.—*Dublin Journal of Medical Science.*

Certain Points of Interest in Phthisis.—Loomis, in an exceedingly interesting and practical contribution on this subject, refers to certain points which have not been set down in any text-book. Being asked what point would influence him more than any other in giving a prognosis in a case of phthisis, he would answer, "The condition of the patient's stomach." When assimilation of food is good, the prognosis is always favorable, often even with desperate lung conditions. Rapid heart action is a second condition that renders the prognosis bad. When there is only slight lung involvement, and the heart action is always above normal even at rest, and when on the slightest exertion it goes up to 110 or 120 beats, the outlook is always unfavorable. This condition is generally seen in young subjects of high nervous organization. It is more common in women than in men. This condition is not dependent on temperature, for at the time of day when the temperature is normal, the pulse is still rapid. His experience has been that the phthisis of advanced age is often latent in its beginnings, slow in its advance, tending to destruction of limited portions of the lungs, and is found with few secondary derangements accompanying it. A few years ago, he had opportunities to make autopsies on a large number of old people who died at the almshouse. Fully 60 per cent. of the subjects had chronic phthisis. Relative to hemoptysis, he quotes the following conclusions of 900 patients analyzed by Stricker: (1) Of soldiers attacked with hemoptysis without cause, 86 per cent. became tuberculous. (2) When from a cause, as military drills, 74 per cent. became tuberculous. (3) When from injury, only 50 per cent. developed tuberculosis. The experience of Loomis has been, that hemoptysis early in the disease does not affect the prognosis one way or the other, especially if it is not followed by fever which lasts a number of days. Relative to heredity, he says he does not believe that tuberculous heredity has anything to do with a person's recovery. Of 20 persons known to him who have recovered from phthisis during the past year alone, 9 of them had pronounced tuberculous histories. One had two brothers and one sister die of phthisis. It has been his experionce that alcoholic subjects do badly when they contract phthisis. Another factor to which he gives prominence is weight, and on this subject he speaks axiomatically, that unless a person gains in weight he is not improving, no matter which way other symptoms point. Every one of 23 cases cured referred to in his tables, gained in weight from 8 to 20 pounds. Character is an element in prognosis. A person with strong determined character and a happy disposition, is more likely to recover, even though the disease is far advanced, than the patient with nervous temperament who is depressed by every light and temporary change in his symptoms. His experience with those cases of phthisis which begin at the base of the lungs has been bad. Referring to diagnosis, he says that many times on making autopsies, he has found an active tuberculous consolidated area, an inch or two in diameter, at one apex of otherwise healthy lungs, and with the bronchial tubes in and about the localized consolidation also affected, but on account of the minuteness of the lesion, he would defy anybody to make a diagnosis during life. To recognize these small lesions, he directs the patient's arm to be brought forward, the hand placed on the opposite shoulder, the ear placed over the portion of the lung which is now uncovered by bringing the scapula forward, viz: just above and external to where the bronchial tubes are given off, there will be heard prolonged tubular breathing and fine rales on coughing. This is the very first physical evidence of phthisis, an evidence which will enable a diagnosis to be made weeks before the physical signs can be appreciated in front, where they are ordinarily looked for. He regards tuberculin as a valuable aid in diagnosis, especially in those cases where there is no expectoration and the physical signs negative. He has never seen any bad effects from its use. The treatment of the disease is next dealt with. He speaks particularly of United States government serum. For a long time the government has been experimenting with an antitoxic serum. The serum is provided by the government from purely scientific motives. Fifteen cases were treated at the Loomis Sanitarium with the serum and the following conclusions are made: The average number of injections given each patient was 38. No other treatment was employed. All had the benefit of climate and good food. Four were discharged cured, 6 improved, and 5 became worse under treatment; 11 gained in weight, 2 remained stationary, and 2 lost weight. He says very appositely, a statement which is in accord, I am sure, with other observers, "that one cannot but be impressed with the moral effect which hypodermic injections have on some patients. I have seen in neurotic patients, fever leave and weight increase under daily hypodermics of water." He appends an instructive table of the kind of cases that end in recovery under climatic advantages.—*Medical Record*, May, 1898.

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By A. W. HOISHOLT, M.D., Assistant Physician, State Asylum for Insane, Stockton, Cal.

Encephalitis and Late Epilepsy.—DR. JAMES G. KIERNAN, of Chicago, speaks of the resemblance of epilepsy caused by encephalitis to epilepsy occurring after the age of 25, as regards some of the symptoms and the effect of bromide treatment. They both react badly to alkaline bromides; in the former cases mental symptoms replace the convulsions during the treatment; there is a tendency to impairment of the circulatory innervation of the extremities and bromic dermatoses, are more frequent. The latter form of epilepsy, which is more frequent between 35 and 40, in persons with no decided neurotic family history, and in most of whom lues can be excluded, is frequently attended by localized jerkings of groups of muscles, resembling the Jacksonian form of the attacks which are often observed at the outset of the epilepsy following infantile encephalitis. In late epilepsy these phenomena are apparently due to toxins resultant on nerve exhaustions, which, not being eliminated, as they are normally, by various channels, lead to autointoxication. This resultant condition may be prevented by stimulation of the action of the liver, which eliminates the toxin.

Of late metallic bromides in the form of liquor arsen. auro and liquor arsen. auro and hydrarg. alternated weekly, have undeniably given excellent results in the types just mentioned. They tend to destroy retrograde metamorphosis in the intestine, and hence destroy the undue accumulation of gas.—*Journal of Nervous and Mental Disease*, June, 1898.

Cardiac Epilepsy.—DR. F. MOHNERT, of Vienna, defines this as a form of epilepsy, the cause of which is a disease of the circulatory apparatus. He speaks of a subdivision of this group as "senile arterio-sclerotic epilepsy," which is characterized by an occurrence of the first epileptic attack in individuals of an advanced age, who are subject, in a marked degree, to arterio-sclerosis. With regard to the etiology, it has been assumed that the arterio-sclerosis produces a chronic anemia of the brain, which in turn leads to an irritation of the centers, causing the epileptic attacks. Another explanation brought forward is, that the chronic inflammatory process in the walls of the cerebral arteries must be a source of irritation to the surrounding tissue, and the vessel being made thicker and more rigid than a normal blood-vessel by the endarteritis present, exerts a pressure on the surroundings and its excursions are, therefore, transmitted more directly and with more force to the surrounding tissue. A summation of this irritation may, under certain circumstances, be able to cause epileptic attacks. The therapy in these cases must naturally first be directed toward the primary disease, and next be applied to the attacks themselves, using such remedies as bromides, arsenic, iron, etc —*Wiener med. Wochenschrift.—Centralbl. f. innere Medicin*, June 25, 1898.

Inequality of Pupils.—DR. H. FRENKEL, of Lyon, in an article on this subject, says that one meets with a physiological inequality of the pupils (anisocoria). This inequality may be due to anisometropia, inequality of the visual power, inequalities in the peripheral vision of both eyes, corneal defects, etc. He does not consider pupillary inequality a stigma of degeneration, as the physician of a prison at Lyon, who had carefully examined prisoners in this direction, found it present in only 5 per cent. of the inmates, which percentage the writer does not consider high enough to entitle it to consideration. The manifestation is often congenital; thus the author found it present in 10 children, during the first year of life, among several hundred examined. In the remaining cases it is a morphological peculiarity, and is said to be present in over 1 per cent. of all individuals.—*Presse Méd.—Centralblatt f. innere Medicin.*

FORMULÆ.

By H. E. SANDERSON, Ph.B., M.D., Assistant Physician State Asylum for Insane, Stockton, Cal.

Nocturnal Enuresis:

Cupri sulphur. ammon.	0.02
Aquæ distil.	15.00

Sig.—3 to 6 drops twice a day.—*Pediatrics*.

Acute Gastritis.—PEPPER prescribed:

Vini ipecac.
Tinct. nucis vomicæ..āā ʒi

Sig.—Two drops, in water, every 2 hours.—*Medical Record*.

Freckle Lotion.—The following formula is recommended in the *Journal de Medecine de Paris*:

Mercuric chloride	8 grains
Sugar	4 drachms
White of one egg,	
Lemon juice	1 ounce
Distilled water	8½ ounces

To be applied every morning and allowed to dry on.—*Monthly Retrospect of Medicine and Pharmacy*.

Eczema Marginatum.—Unna recommends the following application:

Mercury bichloride	1 part
Ichthyol	20 parts
Distilled water	200 parts

Sig.—Apply morning and night; then dust with starch.—*New York Medical Journal.*

Acute Articular Rheumatism:

Sodii salicylat	ʒ viii
Iodoform	ʒ iss
Vaselin	ʒ iiss
Ext. hyorcyam	gr. lxxv

Sig.—Apply as directed.—*Journal de Médicine de Paris.*—*Philadelphia Medical Journal.*

METEOROLOGY.

Summary for June, 1898.—*Temperature.*—The normal temperature of the State for June is 71.4°; the average for June, 1898, was 71.3°, a departure from the normal of -0.1°; the highest monthly mean was 99.2°, at Volcano Springs; the lowest, 50.8°, at Dunsmuir. The maximum temperature was 123°, at Volcano Springs, on the 26th. The minimum, 17°, at Bodie, on the 4th. The absolute range for the State was 106°. The greatest monthly range was 58°, at Blue Lake City; the least, 27°, at Eureka.

Rainfall.—The normal precipitation for the State for June is 0.26 inches; the average for June, 1898, was 0.25 inches, a departure from the normal of -0.01 inches. The greatest monthly precipitation was 3.32 inches, at Upper Mattole; the least, nothing, at many stations.

Wind.—The prevailing direction of wind was west.—W. H. Hammon, Forecast Official and Section Director.

Summary for July, 1898.—*Temperature.*—The normal temperature of the State for July is 81.4°; the average for July, 1898, was 81.4°, a departure form the normal of 0.00°; the highest monthly mean was 102 2°, at Volcano Springs; the lowest, 52 4°, at Point Reyes The maximum temperature was 124°, at Volcano Springs, on the 13th. The minimum, 27°, at Bodie, on the 24th and 25th. The absolute range for the State was 97°. The greatest monthly range way 78°, at Paso Robles; the least, 13°, at Port Los Angeles.

Rainfall.—The normal precipitation for the State for July is .04 inches; the average for July, 1898, was T, a departure from the normal of -.04 inches The greatest monthly precipitation was .22 inches, at San Jacinto; the least, nothing, at many places.

Wind—The prevailing direction of wind was west.—W. H. Hammon, Forecast Official and Section Director.

Summary for August, 1898.—*Temperature.*—The normal temperature of the State for August, 1898, was 74.5°, a departure from the normal of 00.0°; the highest monthly mean was 101 6°, at Mammoth Tank; the lowest, 53.9°, at Point Reyes. The maximum temperature was 124°, at Volcano Springs, on the 14th. The minimum, 23°, at Bodie, on the 3d. The absolute range for the State was 101°. The greatest monthly range was 73°, at Blue Lake City; the least, 17°, at Port Los Angeles.

Rainfall.—The normal precipitation for the State for August is 0.05 inches; the average for August, 1898, was 0.02 inches, a departure from the normal of —.03 inches. The greatest monthly precipitation was .99 inches, at Edgewood; the least, nothing, at many places.

Wind.—The prevailing direction of wind was west.—W. H. Hammon, Forecast Official and Station Director.

California—Tabular Statement for June, 1898.

STATIONS.	Temperature.						Rainfall.		Mean Relative Humidity	Weather.			Wind.	Furnished by—
	Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No. of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn ....Cal.	68.1	93	49	------	------	------	2	0 97	------	26	0	4	N.E.	Southern Pacific Company.
Berkeley......... "	63.1	91	49	72.4	53.7	18.7	3	0.24	------	14	10	6	S.	Obs. University of California.
Colfax............ "	68.0	94	47	------	------	------	2	1.50	------	28	0	2	N.	Southern Pacific Company.
Coronado........ "	------	------	------	------	------	------	------	------	------	------	------	------	------	H. A. Masac.
Eureka........... "	56.0	75	45	60.9	51.7	9.2	9	1.21	------	11	6	13	N.W.	Weather Bureau Dept. Agr.
Fresno........... "	77.2	107	51	93.9	60.5	33.4	0	0.00	------	27	3	0	N.W.	" " "
Keeler .... "	82.0	105	60	------	------	------	0	0.00	------	22	7	1	S.	California and Nevada R. R.
Los Angeles.... "	67.1	95	50	77.8	56.4	21.4	0	T	------	6	22	2	W.	U. S. Weather Bureau.
Monterey .... "	62.1	92	53	------	------	------	1	0 06	------	28	0	2	W.	Southern Pacific Company.
Napa............ "	65 7	102	42	82.5	48.9	33.6	1	0.37	------	17	13	0	S.W.	Station Napa Insane Asylum.
Oakland.......... "	63.7	89	50	74.5	52.9	21.6	1	0.39	------	14	11	5	W.	Chabot Observatory.
Paso Robles.... "	67.2	105	36	91.0	43.3	47.7	0	0 00	------	28	2	0	N.W.	Agr. Experimental Station.
Red Bluff....... "	75.0	102	44	89 0	62.0	27.0	2	0.14	------	21	6	3	S.E.	Weather Bureau Dept. Agr.
Sacramento..... "	69.6	99	47	83.9	55.2	28.7	1	0.14	55	24	5	1	S.W.	" " "
San Bernardino "	70.8	99	45	88.4	53.2	35.2	0	0.00	------	25	5	0	W.	A. K. Johnson, M. D.
San Diego....... "	63.8	88	54	68.5	59.2	9.3	1	0.02	------	23	3	4	S.W.	Weather Bureau Dept. Agr.
San Francisco.. "	59 0	89	49	66.1	51.9	14.2	1	0.19	------	18	9	3	S.W.	" " "
Santa Barbara.. "	64.0	90	48	71.7	56.3	15.4	0	0.00	------	30	0	0	S.W.	Hugh D. Vail.
Santa Cruz...... "	63.2	100	40	79.0	47.3	31.7	1	0.06	------	19	11	0	S.W.	Ralph Springer.
Yuma...........A. T.	------	------	------	------	------	------	------	------	------	------	------	------	------	Weather Bureau Dept. Agr.

Blank (----) indicates data missing.

California—Tabular Statement for July, 1898.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No. of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn ....Cal.	71.4	110	57	------	------	------	0	T	------	31	0	0	N.E.	Southern Pacific Company.
Berkeley......... "	61.6	94	50	70.1	53.8	16.3	0	0.00	91.5	10	16	5	S.	Obs. University of California.
Colfax............ "	77.4	106	64	------	------	------	0	0.00	------	31	0	0	N.	Southern Pacific Company.
Coronado......... "	------	------	------	------	------	------	----	------	------	----	----	----	------	H. A. Masac.
Eureka........... "	55.0	63	47	58.0	51.2	------	0	0.00	87.0	10	7	14	N.W.	Weather Bureau Dept. Agr.
Fresno............ "	84.8	114	58	102.3	65.5	------	0	0.00	------	29	2	0	N.W.	" " "
Keeler .... "	90.2	113	70	------	------	------	0	00.0	------	20	10	1	N.	California and Nevada R. R.
Los Angeles.... "	70.0	91	56	82.0	59.0	------	1	0.07	75.0	12	19	0	W.	U. S. Weather Bureau.
Monterey .... "	59.9	71	52	------	------	------	0	0.00	------	21	0	10	S.W.	Southern Pacific Company.
Napa........... .. "	67 3	106	45	------	------	------	0	0.00	------	23	8	0	S.W.	Station Napa Insane Asylum.
Oakland......... "	62.0	93	50	------	------	------	0	0.00	------	13	15	3	W.	Chabot Observatory.
Paso Robles.... "	65.9	112	34	------	------	------	0	0.00	------	28	3	0	S.W.	Agr. Experimental Station.
Red Bluff....... "	83.0	112	57	98 9	67.3	32 0	0	0.00	27.0	31	0	0	S.E.	Weather Bureau Dept. Agr.
Sacramento..... "	74.0	104	50	91.5	56.9	34.6	0	0.00	49.0	30	1	0	S.W.	" " "
San Bernardino "	76.0	107	49	------	------	------	0	0.00	------	23	8	0	W.	A. K. Johnson, M. D.
San Diego....... "	67.0	77	60	71.0	62.4	------	0	0.00	82.0	30	1	0	N.W.	Weather Bureau Dept. Agr.
San Francisco.. "	56.0	88	47	61.8	50.5	11.4	0	0.00	86.0	16	14	1	S.W.	" " "
Santa Barbara.. "	65.6	78	54	------	------	------	0	T	------	24	6	1	W.	Hugh D. Vail.
Santa Cruz...... "	62.0	86	41	------	------	------	0	0.00	------	13	14	4	S.W.	Ralph Springer.
Yuma...........A. T.	91.9	113	73	105.2	78.6	26.6	0	0.00	43 3	23	7	1	S W.	Weather Bureau Dept. Agr.

Blank (----) indicates data missing.

California—Tabular Statement for August, 1898.

STATIONS.	Temperature.						Rainfall.		Mean Relative Humidity	Weather.			Wind.	Furnished by—
	Mean	Highest	Lowest	Mean Highest	Mean Lowest	Mean Daily Range	No. of Days Rain Fell	Total Rainfall		No. of Clear Days	No. of Fair Days	No. of Cloudy Days	Prevailing Direction.	
Auburn ....Cal.	75.8	110	63	------	------	------	0	0.00	------	31	0	0	N.E.	Southern Pacific Company.
Berkeley......... "	61.7	78	51	------	------	14.6	2	0.04	88.1	7	14	10	S.	Obs. University of California.
Colfax............ "	76.9	105	58	------	------	------	0	T	------	31	0	0	N.E.	Southern Pacific Company.
Coronado........ "	73.6	82	69	------	------	------	0	0.00	------	----	----	----	------	H. A. Masac.
Eureka.......... "	55.9	64	49	59.5	52.3	------	1	0.06	89 6	5	12	14	N.W.	Weather Bureau Dept. Agr.
Fresno........... "	81.7	113	54	99.0	64.2	------	0	00.0	30.0	25	6	0	N.W.	" " "
Keeler .... "	89.7	108	71	------	------	------	0	0 00	------	23	7	1	S.	California and Nevada R. R.
Los Angeles.... "	74.0	96	56	86.0	62.0	------	0	T	71.0	12	19	0	S.W.	U. S. Weather Bureau.
Monterey .... "	62.7	82	50	------	------	------	0	0.00	------	24	0	7	W.	Southern Pacific Company.
Napa.......... .. "	67 2	104	46	------	------	------	0	0.00	------	14	16	1	S.	Station Napa Insane Asylum.
Oakland......... "	61.6	82	49	------	------	------	0	T	------	6	21	4	W.	Chabot Observatory.
Paso Robles.... "	66.4	112	34	------	------	------	0	0.00	------	26	5	0	S.W.	Agr. Experimental Station.
Red Bluff....... "	81.3	111	56	96 2	66.4	29.9	0	T	31.6	27	3	1	S.E.	Weather Bureau Dept. Agr.
Sacramento..... "	73.8	107	51	90.1	57.6	32.5	0	0.00	50.2	25	6	0	S.W.	" " "
San Bernardino "	78.6	108	47	------	------	------	0	0.00	------	27	4	0	W.	A. K. Johnson, M. D.
San Diego....... "	70.6	83	63	------	------	------	0	0.00	------	----	----	----	N.W.	Weather Bureau Dept. Agr.
San Francisco.. "	58.0	72	47	62.2	51.9	10.2	0	T	88.2	10	17	4	S.W.	" " "
Santa Barbara.. "	68.6	90	56	------	------	------	0	0.00	------	26	4	1	W.	Hugh D. Vail.
Santa Cruz...... "	63.5	94	42	------	------	------	0	T	------	19	8	4	S.W.	Ralph Springer.
Yuma..........A. T.	91.4	113	74	103.1	79.6	23.5	2	0.19	50 8	25	4	2	S.W.	Weather Bureau Dept. Agr.

Blank (----) indicates data missing.

[illegible]

Communications are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

Sacramento: August, September, October, 1898.

AN APOLOGY AND AN EXPLANATION.

We profoundly regret that, owing to circumstances over which we have had no control, a very humble apology is due the friends and supporters of the Occidental Medical Times. For a number of months past the appearance of this journal has been habitually tardy, a fact no less deplored by its editor and publisher than by its numerous well-wishers. Many of the latter have inquired as to the well-being of their accredited monthly visitor, and to these explanations have been made. Others, though perhaps none the less interested, have borne the unpleasantness in silence. To all it now only remains to briefly express our regret, coupled with the hope that things will be better in the future, and an assurance that a similar condition will not recur under the present management.

The local medical journals of the United States are, with rare exceptions, owned, edited and published by medical men engaged in active practice. If the journal be run on a liberal basis, and on strictly professional lines rather than as a commercial venture, its income will rarely be sufficient to afford adequate remuneration for much of the labor bestowed upon it. This unremunerated labor must, therefore, be furnished by a staff to whom medical journalism is not a means of livelihood. In common with many other journals, the Medical Times has been conducted on this basis, and that it has achieved the measure of success accorded to it is due entirely to the faithful work of the staff and the warm interest that has always been evinced for it by its contributors.

All who are engaged in active practice will realize how little time is afforded the physician for work apart from the duties that necessarily claim his first attention. Normally this means working up, to his full capacity, without a saving margin in time or a reserve, in work accomplished, the fruits of which are not immediately needed. The fall of '97 found this journal in the situation already outlined, and even then somewhat behind its regular date of publication. At this juncture a sharp and unexpected illness interrupted the editor's labors, and for several weary weeks thereafter left him in a condition that only permitted the accomplishment of absolutely necessary professional work. When it was possible to again take charge of the journal every effort was made to overtake arrears, and with fair success, when the work was again interrupted; this time by the illness of a faithful collaborator. The extra professional work thereby entailed was more than sufficient to wipe out the narrow margin on which the journal had been running, and again for several weeks literary work was an impossibility. In this manner an arrearage accumulated that it was impossible to handle, and it has therefore been decided to combine three issues in order to bring the matter within practicable limits. This has been done with the current number, and it is believed that the present volume can be completed within the year.

It has never been the policy of the MEDICAL TIMES to deal with its private affairs in its columns, or to devote them in any sense to matters savoring of personality. Yet, under the circumstances, this explanation seems demanded, and it is given as the best apology for much that has been unavoidable.

NOTES.

San Joaquin Valley Medical Society.

The third semi-annual meeting of the San Joaquin Valley Medical Society will be held in Masonic Hall, Hanford, Cal., on Tuesday, October 11th. The Society will convene at 8 A. M., and will hold an afternoon and evening session. After the evening session a banquet will be tendered the visitors by the local profession. The following are the papers with the names of their authors, as well as the names of those who will open the discussions on the various subjects: "Electricity in Some Forms of Genito-Urinary Disease," N. P. Duncan, Hanford; J. B. Rosson, Tulare. "Exophthalmic Goitre," A. Shaffer, Bakersfield; Chester Rowell, Fresno. "Hypertrophic Rhinitis," D. H. Trowbridge, Fresno; L. E. Felton, Hanford. "Bradycardia," J. A. Moore, Hanford; Jas. H. Wagner, Selma. "Blood Diagnosis," Frederick Twining, M.S.Ph.C., Fresno; W. N. Sherman, Merced. "Artificial Feeding of Infants," J. C. Moore, Lemore; R. A. Furgusson, Bakersfield. "Three Interesting Surgical Cases," J. B. Rosson, Tulare.

SAN FRANCISCO MEDICO-CHIRURGICAL SOCIETY.

Regular Meeting, August, 1898.

The President, Wm. Fitch Cheney, M.D., in the Chair.

Election of Secretary.—Dr. C. F. Griffin was reëlected Secretary for the ensuing year.

Effect of Carbonic Acid Water on Digestion.—Dr. A. W. Perry read a paper upon this subject [To be published.]

Dr. W. F. Cheney: I have been able to find very little in literature that bears upon the therapeutics of carbonic acid water, and for this reason I appreciate the value of what Dr. Perry has done. Still, I must take issue with his statement concerning the absorption of substances in the stomach, as it varies so widely from general opinions as expressed by writers. The statement made was that no absorption takes place in the stomach, and that the value of carbonic acid water lies in the faculty it possesses of hastening the stomach contents into the intestines. These experiments depend for their value on the truth of this non-absorption on the part of the stomach, as determined by the quoted animal experimentation. This point, to me, is not satisfactory. It may easily have been that there was a chronic inflammation in the stomach of the dog; or there may have been some condition brought about by the ligature of the pylorus that had to do with the result obtained. At any rate, the consensus of opinion is that absorption does take place in the stomach. It seems to me that these experiments may prove two things. They may prove what Dr. Perry says they do, but they may also be interpreted to mean that the carbonic acid water, by stimulating the blood supply to the stomach, increases absorption from the stomach in that manner. The same view may be taken of Table No. 2. The carbonic acid water, by stimulating the blood supply to the stomach, so increases the absorptive power of the stomach for water, that greater amounts are taken up and consequently greater amounts are eliminated, and the whole process is somewhat hastened. This subject, I am satisfied, has not had much written about it. At any rate that part of the subject that relates to the effect on the mucous membrane of the stomach of the introduction of water charged with carbonic acid gas, has not been much written about. Is it possible that it increases the amount of blood in the stomach? Does it stimulate the pouring out of the gastric juice by its presence? Does it stimulate absorption in the mucous membrane of the stomach? These things, I believe, are just what the work of Dr. Perry has proven. It does not seem a sound conclusion that the stomach is merely hastened to push out its contents, as the author would imply.

Dr. C. F. Griffin: I would like to ask Dr. Perry, whether, in order to prove his point, that it was the motor function of the stomach only that was influenced, he used any substances, such as salicylic acid, which are split up only in an alkaline medium, and testing the urine for the time of their excretion. Either this or inclosing other drugs in protective capsules, it would seem to me, would be better than relying upon the uncertain results of the experimental work of tying the pylorus of the dog.

Dr. Perry: In regard to the objects which the experiments prove: (1) There is no absorption from the stomach. Quoting from memory from a paper of Dr. Chittenden's, he mentioned an experiment on a rabbit, an animal very susceptible to strychnine ($\frac{1}{100}$ of a grain is fatal to it), in the stomach of which, after ligature of the pylorus, ¼ gr. of strychnine had been placed and allowed to remain two hours without causing convulsions. I know of no stronger proof that could be adduced than this one test. The latest authors on stomach diseases, notably Van Valzah[1]. state that, practically, no absorption occurs in the stomach. Some sugar and alcohol may be absorbed, probably through endosmosis, but the stomach is an organ of secretion, not of absorption. Regarding the question of Dr. Griffin, about giving substances not soluble in the stomach contents: The methods are unsatisfactory. So slowly does the process go on that it takes from ½-hour to an hour for enough to be broken up in the intestine and absorbed, to get a reaction in the urine. I have made experiments with pills of potassium iodide coated with salol, but there is much trouble with the mechanical part of it. If the coating is too thin the water will get at the soluble salt, and if it is too thick, much time is taken for it to dissolve. Taken all in all, it is not a very good test for the motile function of the stomach. Van Valzah recommends for this purpose the placing of a definite amount of sugar in the stomach and in half an hour remove the stomach contents and see how much sugar it contains. The use of potassium iodide to measure the absorptive function of the stomach, was introduced by Penzoldt, 20 years ago; but in the light of late experiments, which show that no absorption takes place in the stomach, we consider this experiment obsolete.

---

[1] Diseases of Stomach, 1898, page 140.

A Case of Intracranial Murmur.—**Dr. L. C. Lane** said: A curious case was presented at my office to-day, of a child, about 2 years of age, who had a very distinct murmur, which came from within the cranium. Dr. Rigdon also saw the case and I will ask him to give the details of it.

Dr. R. L Rigdon: The child was a girl about 2 years of age, and was, apparently, healthy in every way. The sound, I am told, was first heard by the mother, who noticed it while holding the child's face against her own. It was a pure musical tone, occurring regularly with the systole of the heart, but not entirely dying away between the heart beats. It seemed rather like the intensification of a constant sound than of a purely systolic one, and could be heard by the ear when placed as far as 3 or 4 inches from the child's head. The heart was normal. The sound was heard from the angle of the jaw upward over the temporal bones. It seemed as loud on the one side as on the other, but loudest about midway between the angle of the jaw and the site of the anterior fontanelle. The fontanelle was closed. The head seemed normal in every other way. There was no exophthalmos. There seemed to be no pain, but the child, at times, would say, "now its coming; its coming again, mamma," at the time placing her hands on the side of the head. I have no explanation to offer as to the condition causing the trouble.

ALAMEDA COUNTY MEDICAL ASSOCIATION.

Regular Meeting, August 9, 1898.

The President, H. G. Thomas, M.D., in the Chair.

Dr. W F. B. Wakefield read a paper on "The Prevention of Mastitis." [To be published.]

Dr. R. T. Stratton: I heartily concur in the conclusions of the paper. Experience in the use of the binder has led me to appreciate its value. In considering the prevention of mastitis thoroughly, however, we cannot safely overlook the predisposing as well as the exciting factors. We must include all those conditions, systemic and local, which reduce the resisting power of the mammary tissues to bacterial infection. Among these are lack of sufficient nutrition, unhygienic surroundings, depressing emotions, exposure to cold, etc. All local irritations, such as are caused by undue pressure upon the gland from the clothing, by faulty position of the patient in bed, or by traumatism, are especially harmful. Previous mammary inflammation also predisposes to a subsequent attack. As true mastitis is impossible without microbic infection, cleanliness takes the first rank in point of importance. Not only the nurse's hands, but those of the mother, as well as the infant's mouth, should receive careful attention. During pregnancy the nipples should not be subject to pressure by the clothing, and it seems reasonable to suppose that benefit would result from the adoption of the recommendation to attempt the toughening of the skin of the nipples by daily gentle manipulation.

Dr. F. L. Adams: Prevent milk stasis and fissured nipples and you will have little trouble with mastitis. Ninety-five per cent. of this trouble is from fissured nipples, allowing the entrance of bacterial infection. Cases of abscess will occur from obstruction in the milk gland. A portion of the gland becomes engorged, and you will sometimes have an abscess in spite of all you can do. I have not tried the Murphy binder, but think it most excellent. I have used belladonna plaster, covered with cotton, and then a bandage, fastened in the back and over the shoulders. Much of the trouble incident to child birth, results from patients not following instructions given them by their physicians.

Many serious complications arise that might have been prevented by timely treatment.

Dr. S. I. [illegible]: Early in pregnancy I have the patient bathe the nipples in cold water. I instruct the nurse in all cases not to put the infant to the breast oftener than every four hours; if the breasts become engorged I give salines, and if needs be, bandage.

Dr. S. H. Buteau: We all adopt methods of our own that we have found work well. Instead of a cloth bandage I use the common rubber dam that dentists employ. I put cotton over the breasts and back, and then adjust the rubber. It has the advantage over cloth, that it need not be changed. When there is marked induration and infection, it is not wise to put on a binder. I once had a case in which I was in doubt as to bacterial infection. The temperature was 101° F. I put on a bandage and the temperature went up to 104.4°. I removed the bandage and the temperature fell, showing conclusively that pressure hastens the absorption of infective products.

Dr. L. S. Burchard: I use a suspension bandage, and apply it on the fourth day. I never apply a bandage unless I wish to dry up the milk. I have the bowels moved by salines, and give quinine.

Dr. J. L. Milton: To prevent bacterial infection, wash the nipple and the infant's mouth after nursing, with borax water.

Dr. R. C. Krone: As an antiphlogistic, I have used an ointment of iodide of lead, with benzoated lard. So long as there is no bacterial infection, this will effect a cure. To prevent mastitis, use massage or pressure. Massage if the child is nursing, pressure if not. Prevent infection by cleanliness. The milk furnishes the food for bacteria, hence the child's mouth should be carefully looked after.

OBITUARY.

CHAS. M. FISHER, M.D.

Sweet yet bitter is the duty of recording the life and death of our esteemed associate, **Dr. Chas. M. Fisher.** After four weeks of suffering from typhoid fever, with serious complications, he died July 28, 1898. On that day a cloud seemed to spread over the medical horizon of this city, for each member of our profession was sadly depressed by the announcement of his passing away. So near and so dear was he to us—his friends and comrades—that reverently and affectionately we drew ourselves within the narrow circle, which usually embraces only those united by ties of blood, and kindred, and there we grieved as over the loss of a brother. To realize the stepping stones in his life's history is to feel that his untimely death cut short a career that was destined to splendid achievements. Dr. Fisher was born in Berlin, Penn., and would have been 35 years of age had he lived until August 29th of this year. His early boyhood was spent in the State of his birth, where he attended the public schools, and later engaged in teaching. In 1883 he came to this coast. Upon his arrival he accepted the first employment which was offered—work in a vineyard in this county. He was not long, however, in securing a school, and was engaged in teaching until he entered Cooper Medical College, in 1886. He continued there for two years, when, his funds growing low, he was forced to seek employment and was fortunate enough to be chosen Assistant Superintendent of Oakland Schools. While in this office he continued his studies at Cooper and graduated in 1890. Some months later he began the practice of medicine in this city, at the same time teaching a night school. Few physicians have ever built up a practice more rapidly, and in a short time he resigned from the school department, that he might devote himself entirely to his chosen profession. In this new field, by his persistent application, by the force and vigor of his intellect, by his unimpeachable character and honesty of purpose, he rose rapidly in public confidence and esteem. He exercised, in a high degree, perseverance and courage—the forerunner of genius. Not wealth nor social pride, but hard earned merit won for him the honors he wore so well. An ex-member of our Board of Health, County Physician, Professor of Histology in Cooper Medical College, Clinical Lecturer in the City and County Hospital of San Francisco, these are the jewels he has left us, his friends, for the settings of memory. These are characteristics of the heart as well as of the intellect. I know I utter a sentiment that will touch a responsive chord when I say, that as a citizen, Dr. Fisher was ever patriotic and public spirited; as a friend, ever unselfish and true; as a son, ever tender and devoted; as a practitioner, ever ready and cheerful to alleviate the sufferings of the unfortunate. His career was short, but

"He lives most who feels most,
Acts the noblest, lives the best."

S. H. B.

JOHN F. MORSE, M.D.

In the death of Dr. John F. Morse, from cerebral hemorrhage, on August 21, 1898, the Pacific coast has lost not only her leading surgeon, but one of the most brilliant and successful operators in the United States. As a man, Dr. Morse possessed an individuality peculiarly his own. Naturally of a bashful and timid disposition, he had cultivated his will power to such an extent that he had become a leader of men. He possessed a peculiar magnetism that made him always a prominent figure among his associates. His friends were legion and his enemies not a few; there was no neutral ground between. He despised fakirs and all that flavored of charlatanism and freely expressed his opinion either in public or private, when the subject was debated. He would, himself, go to any extreme to avoid newspaper notoriety. His manner was at times brusque toward his patients, but when his services were necessary to relieve pain, he was tender and sympathetic. He was naturally a surgeon, but would have risen to the top in any profession His early training was under the supervision of the late Dr. Wm. A. Douglas, in his time the leading anatomist and surgeon of the State. Under his tuition Dr. Morse received a most thorough training in anatomy, the ground work of surgery. His home training, through the influence of his mother, had rendered him systematic in all his undertakings. His mother quizzed him daily on his anatomy up to the time he graduated from the Medical College of the Pacific, in 1878, and he always spoke gratefully of the care, patience, and time which she had devoted to his early education; he would descend from his buggy whenever he met her, no matter what his errand or how hurried, to greet her affectionately. After graduating from the Medical College of the Pacific, he went abroad and continued his studies in the Frederich Wilhelm University, of Berlin, where he graduated in 1881. He then went to Heidelberg and devoted his time to surgery under the guidance of Professor Czerny, who recognizing his special talent for the chosen study, favored him with opportunities seldom granted to foreigners. He closed his European studies by visiting the clinics in Vienna, Paris, and London, and returned to San Francisco in the spring of 1882 He was associated with Dr. Douglas until the latter's death. In 1883 he was elected surgeon to the German Hospital, which position he retained until the day of his death. Only those who are familiar with the work he did at this institution are able to appreciate his tremendous energy and wonderful skill. Until the last year of his life he never took a vacation of more than a few days from his professional work. He was regular as the clock in his appearance at the hospital, and never left until he saw the last patient properly dressed. He performed the most difficult and unusual operations without ostentation, and more of them than any other surgeon on the coast. He recognized no specialty in surgery, but claimed the whole field as his own; there was no portion of the anatomy with which he was not familiar, no region of the body which he feared to expose, not on account of any daring or boldness, but because of his thorough knowledge of the anatomy. He would never endanger the life of a patient by exposing him to unnecessary risks, but would weigh well the chances; often he would seem to act quickly, but that is where he excelled, in the rapidity with which he would analyze the symptoms and decide on the remedy. Since 1892 he did not interest himself in the transactions of any of the medical societies, although still retaining his membership, nor since that time has he reported any of the results of his skilful work for the journals. Previous to that year he took an active part in the discussions of the local medical societies. He was precise and positive in debate and possessed the wonderful gift of ready reference to any author he chose to quote, remembering each fact as well as the chapter or page in the journal or book from which he quoted. He was an omniverous and rapid reader and quickly sifted the wheat from the chaff, and not alone stored it securely in a niche in his memory, but by means of notes and clippings, which he saved and pasted systematically in scrap books, he always had at hand that which was of value to him. With all the time he devoted to his profession, he still found leisure moments for other studies, so that there were few subjects of public interest with which he was not familiar. During the latter years of his life he occupied himself greatly with public affairs, mixing in politics in order to secure to the city that which he had struggled to obtain for many years, namely, an ambulance service, pure food laws that would prove efficient, and a new City and County Hospital. It was his active participation in the affairs of the Board of Health that deprived him of the rest he needed from the arduous duties of his profession. He could not neglect any of his professional responsibilities and he would not shirk his work as a public official; as a consequence he fell a martyr to his sense of duty. That he was greatly loved and sadly missed by the community was evidenced by the tremendous throng that crowded in and about the Masonic Temple, where the public obsequies were held, not alone the civic and fraternal organizations turning out in full force to bid the last adieu, but people from all stations in life crowded about the casket, mothers lifting their limping children to gaze upon and be impressed by the face of him to whom they were beholden for a tolerable existence, that in after years, when they might more fully appreciate the services he had rendered, they would have in their memories an imprint of his kindly face. Many of the younger practitioners of the State will miss his ever willing help; he was one to whom they could safely appeal in time of need and on whom they could place every reliance of receiving ethical and courteous treatment. He was ethical to a fault to all members of the profession, and even his opponents could not complain of any injustice suffered at his hands He let no personal opinion interfere with his estimate of a man's medical qualifications and was always ready to protect and help a brother practitioner in times of trouble. In February, 1887, a modest article entitled: "Cure of Abdominal Aneurism by Loreta's Method," appeared in the *Pacific Medical and Surgical Journal and Western Lancet*. It is the simple report of a case, but it made the author known throughout civilization, as it is the report of the first successful cure of an abdominal aneurism. The final paragraph which reads: "This the first successful case of the kind proves the feasibility of Prof. Loreta's method of treating aneurisms of the abdominal aorta," was characteristic of the author, in that he never assumed any credit for his own work excepting that to which he was justly entitled. Though only 41 years of age when he died, Dr. Morse was a pioneer in many of the successful advances in modern surgery In 1885 he operated on a patient of Dr. Hirschfelder's, opening the skull and removing a tumor of the brain, a glioma, the fourth of the kind reported in literature and the first operation performed in the United States. In other operations, such as for appendicitis, he was one of the first in the field, having performed great numbers of cases successfully. He was equally successful in all other abdominal operations. In plastic surgery he was an expert, carefully mapping out each case so as to obtain the best results; as a consequence he was seldom disappointed. He attributed his uniform success to the care and absolute cleanliness on which he insisted in even the most trivial operations, but those who are familiar with the dexterity with which he handled the scalpel, know that to his skill he owed the greatest measure of his success Had he not have been so diffident in reporting the results of his work he would have occupied a place high up among the famous surgeons of his time; however, that alone which has been recorded in the literature of surgery will give to him everlasting fame.

W. A. M.

REVIEWS AND NOTICES.

Electricity in the Diagnosis and Treatment of Diseases of the Nose, Throat and Ear: With 161 Illustrations. By W. Scheppegrell, M.A., M.D., Ex-Vice-President American Laryngological, Rhinological and Otological Society; Vice-President Western Ophthalmologic and Oto-Laryngologic Association; etc. New York: G. P. Putnam's Sons; pp. 404.

Dr. Scheppegrell has given the profession a valuable contribution in his volume of over 400 pages devoted to the consideration of the diagnosis and treatment of diseases of the nose, throat and ear by the aid of electricity. There is such a confusing variety of apparatus manufactured that it is a great convenience to have a work of this kind, written by a man of experience, to help one in readily securing the best electrical appliances, as well as in treating these diseases by the aid of electricity. The author has taken it for granted that the medical man generally possesses a knowledge of the laws of electrical energy, as little space is devoted to the consideration of those principles. The volume is mostly made up of a description of the various electrical appliances, and the practical details in regard to their use in the treatment and diagnosis of diseases of the nose, throat and ear, and the accessory sinuses. The author himself has devised many methods of electrical treatment, and from his large experience in this field of work is able to speak with authority on the subject. Too much space would be required to enumerate the subjects discussed, for which the reader is referred to the work. To those devoted to this branch of practice, and especially to those who need electrical apparatus, without which no office can be complete, the work is of particular interest and value.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a meeting of the Board of Examiners, held July 5, 1898, the following were granted certificates to practise medicine in this State:

Charles E. Bacon, Los Angeles; Kansas City Med Coll, Mo., March 12, '90.
A. B. Barnes, Oakland; Miami Med. Coll., Ohio, March 1, '67.
Frederick E. Bigelow, San Francisco; Rush Med. Coll., Ill., May 27, '97.
E. J. Blair, San Francisco; Kentucky School of Medicine, Ky., June 30, '82.
William G. Booth, Seattle; the Baltimore Med. Coll., Md., April 21, '98.
P. S. Bruguiere, San Francisco; Med Dept. Univ. Cal., May 17, '98.
Charles F. English, San Francisco; Jefferson Med. Coll., Pa., May 13, '98.
George J. Fanning, Montana; Willamette Univ., Oregon, April 7, '91.
Jessica W. Findlay, New York; Med. Dept. Univ., Michigan, June 28, '89.
Wm. L. Friedman, Alameda; Baltimore Med. Coll., Md., April 13, '97.
A. S. Keenan, San Francisco; Med. Dept Univ Cal., May 17, '98.
Wm L. Owen, New York; Jefferson Med. Coll., Pa., April 3, '89.
F. S. Pope, Victoria; Univ. Trinity Coll., Toronto, Canada, April 6, '98.
Myers A. Preston, San Francisco; Cooper Med. Coll, Cal, Dec. 8, '97.
W. Parsons Read, San Diego; Jefferson Med. Coll., Pa., May 15, '96.
Charles A. Seler, Hay Fork, Cal.; Med. Dept. Univ. Pennsylvania, May 6, '92.
N. C. Trew, San Francisco; Med. Dept. Univ. Cal., May 17, '98.
George Wall, Oregon; Rush Med. Coll. Ill., March 25, '89.
John O. White, Los Angeles; Med. Dept. Univ Nashville, Tenn., March 1, '69.
Maria White, San Jose; Woman's Med. Coll., Maryland, May 1, '86.
C H. Woods, Pasadena; Jefferson Med. Coll., Pa., May 15, '96.

At a meeting held August 5, 1898, the following were granted certificates:

Melvin A. Bresee, Los Angeles; Coll. Med. Univ. Southern Cal., June 3, '96.
Jas. Bird Cutter, San Francisco; Med Dept. Univ. Oregon, April 3, '93.
Logan D. Dameron, Phœnix, A. T: Hosp Coll. of Med., Ky., June 17, '91.
Grace Feder, San Francisco; Med. Dept. Univ. of California, May 13, '96.
Willian J Findley, New Point, Mo.; Coll. of Phys. and Surg., Keokuk, Iowa, March 1, '87.
Mary L Gardner, San Francisco; Med. Dept. Univ Colorado, May 29, '95.
Charles W. Gaskell, Los Angeles; Univ. of the South, Sewance, Tenn, Jan. 6, '98.
Nathanial S. Greenwood, Baltimore; Md; Baltimore Univ School of Med, Md., April 16, '96.
Giles S Hall, Los Angeles; Rush Med. Coll., Ill., May 26, '97.

Frederick C. [illegible]; Bellevue Hosp. Med. Coll., N. Y., March [illegible]
[illegible]
Wm. J. [illegible]; Coll. Phys. and Surg., San Francisco, Cal., July 14,'98.
John [illegible], Los Angeles; Coll. Med., Univ. [illegible] California, June 2,'98.
[illegible] Cal., July 14,'98.
B. [illegible], April 15,'97.
C. A. [illegible] Med. Coll., [illegible] Mar. 3,'95.
Frank [illegible], Oakland; Coll. Phys. and Surg., San Francisco, Cal., July 14,'98.
David [illegible]; Coll. Phys. and Surg., St. Louis, Mo., March 28,'95.
Alfred [illegible], Los Angeles; [illegible] Univ. [illegible], April [illegible],'97.
John Allen [illegible], Los Angeles; St. Louis Med. Coll., Mo., April [illegible],'98.
G. A. [illegible], Los Angeles; Kentucky School of Med., Ky., June 30,'98.
Davis Angus Smith, San Diego; Keokuk Med. Coll., Iowa, March 8,'9[illegible].
Herbert R. Smith, San Francisco; Coll. Phys. and Surg., San Francisco, Cal., July 14,'98.
Halsted A. [illegible], San Francisco; Cooper Med. Coll., Cal., Dec. 8,'97.
Frank D. Walsh, San Francisco; Coll. Phys. and Surg., San Francisco, Cal., July 14,'98.
Charles L. Weitman, Oakland; Coll. Phys. and Surg., San Francisco, Cal., July 14,'98.
Adolf F. [illegible], San Francisco; Coll. Phys. and Surg., San Francisco, Cal., July 14,'98.
J. J. Willingham, Los Angeles; Rush Med. Coll., Ill., May 26,'97.
Hermon F. Wilson, San Francisco; Coll. Phys. and Surg., San Francisco, Cal., July 14,'98.

At a meeting held September 6, 1898, the following were granted certificates:

Henry Abraham, San Francisco; Med. Dept. Univ. of California, May 17,'98.
John J. [illegible]; Jefferson Med. Coll., Pa., April 15,'98.
Asahel [illegible]; Coll. Phys. and Surg., Chicago, Ill., April 21,'96.
Solon Briggs, Pasadena; Albany Med. Coll., N. Y., Dec. 22,'69.
Titian James Coffey, Los Angeles; Coll. Med., Univ. Southern California, June 2,'98.
Victory A. Derrick, Oakland; Coll. Phys. and Surg., San Francisco, July 14,'98.
Ollino Burton Doyle, Fresno; Kentucky School of Med., Ky., June 30,'98.
Frank Raymond Dray, Sacramento; Med. Dept. Harvard Univ., Mass., June 29,'98.
Henry M. Fine, Oakland; Med. Dept. Univ. Cal., May 17,'98.
H. A. Hess, San Francisco; Barnes Med. Coll., Mo., April 6,'97.
Luther C. Jones, Sutter Creek; Coll. Phys. and Surg., N. Y., June 13,'98.
Malvina Irma Judell, Alameda; Med. Dept. Univ. California, May 17,'98.
A. J. Macqueen, San Francisco; Royal Coll. Phys., Edinburgh, Scotland, April 8,'71; Royal Coll. Surg., Edinburgh, Scotland, May 16,'77; Univ. Brussels, Belgium, Dec. 8,'91.
James A. J. McDonald, San Francisco; Coll. Phys. and Surg., San Francisco, July 14,'98.
John S. Meyer, Challis, Idaho; Central Med. Coll., Mo., March 31,'97
Wm. Clement Milward, San Francisco; Univ. Edinburgh, Scotland, August 1,'79.
W. Albert Reinhardt, Minneapolis; Coll. Phys. and Surg., Minneapolis, Minn., April 8,'96.
Ralph J. Schirman, San Francisco; Baltimore Med. Coll., Md., March 30,'93.
Charles Schumacher, Sheep Ranch; Univ. Gottengen, Germany, Jan. 30,'66.
Shichia Suzuki, San Francisco; Med. Examining Board, Tokio, Japan, May 31,'98.
Stephen E. Tracy, Richmond, New Brunswick; Med. Dept. Univ. Pennsylvania, June 8,'98.
Curtis Wade Welsh, Los Angeles; Coll. Med., Univ. Southern California, June 2,'98.
Edward Yeates, San Francisco; Kings and Queens Coll. Phys., Ireland, July 14,'86; Royal Coll. Surg., Ireland, July 29,'86; Royal Coll. Surg., Ireland, March 23,'93.

CHAS. C. WADSWORTH, Secretary.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army (Division of the Pacific) from June 20, 1898, to September 20, 1898.

Upon recommendation of the Chief Surgeon, Acting Assistant Surgeon James B. Cutter, will proceed to the Camp near Fort Winfield Scott, California, reporting upon arrival to the commanding officer for duty at that Camp. Par. 1, S. O. 72, Dept. of Cal., June 22, 1898.

Upon recommendation of the Chief Surgeon, Acting Assistant Surgeon Robert E. Williams will change station to Fort Baker, California, on arrival at Angel Island, California, of Assistant Surgeon W. M. Van Patten, First Washington Volunteer Infantry. Par. 2, S. O. 72, Dept. of Cal., June 22, 1898.

Upon recommendation of the Chief Surgeon, Captain Isaac P. Ware, Assistant Surgeon, will, in addition to his present duties, report at 10 A. M. daily at these headquarters, for duty in examining recruits. Par. 1, S. O. 75, Dept. of Cal., June 29, 1898.

Captain Isaac P. Ware, Assistant Surgeon, will, in addition to his present duties, examine recruits to be enlisted for the Second Battalion, California Volunteer Infantry, by 2d Lieut. H. L. Walthal of that organization. Par. 3, S. O. 83, Dept. of Cal., July 14, 1898.

Captain T. A. Rottanzi, Assistant Surgeon Sixth California Volunteer Infantry, is assigned station at the Presidio of San Francisco, California. He will continue on the temporary duty assigned him in Par. 5, S. O. 62, c. s., from these headquarters. Par. 4, S. O. 84, Dept. of Cal., July 15, 1898.

The following named medical officers are, upon recommendation of the Chief Surgeon, assigned for duty with troops about to take passage on the steamer "Pennsylvania": Major S. O. L. Potter, Brigade Surgeon U. S. Vols., Major F. J. Adams, Surgeon First Montana Vols., Assistant Surgeon S. C. Brunning, First Montana Vols., Assistant Surgeon Leroy Southmayd, First Montana Vols. Par. 2, S. O. 85, Dept. of Cal., July 17, 1898.

Acting Assistant Surgeon M. M. [illegible], will, pending further orders in his case, report to Captain Isaac P. Ware, Assistant Surgeon, as assistant in examining recruits. Par. 3, S. O. 89, Dept. of Cal., July 21, 1898.

Captain Thomas U. Raymond, Assistant Surgeon, having reported under the provisions of Par. 26, S. O. 162, c. s. [illegible], upon recommendation of the Chief Surgeon, assigned to duty at these headquarters as Attending Surgeon and Assistant to the Chief Surgeon. Par. 3, S. O. 91, Dept. of Cal., July 23, 1898.

Major Guy L. Edie, Brigade Surgeon, is hereby assigned to the command of the Division Field Hospital at the Presidio of San Francisco, relieving Major William O. Owen, Brigade Surgeon. Major Owen will turn over to Major Edie all property belonging to the Hospital, with exception of such as he may be authorised to take with him to Manila. Par. 6, S. O. 92, Dept. of Cal., July 25, 1898.

Acting Assistant Surgeon Frank B. Robinson will proceed to the Presidio of San Francisco, reporting upon arrival to the commanding officer for duty with the First Troop Utah Volunteer Cavalry. Par. 1, S. O. 92, Dept. of Cal., July 25, 1898.

First Lieutenant Lewis T. Griffith, Assistant Surgeon First New York Volunteer Infantry, will proceed from San Francisco to Honolulu, Hawaiian Islands, on steamer "St. Paul," for the purpose of carrying out instructions given him by the Department Commander. Par. 6, S. O. 93, Dept. of Cal., July 26, 1898.

Acting Assistant Surgeon Henry du R. Phelan, will, pending further orders in his case, report to Capt. Isaac P. Ware, Assistant Surgeon, as Assistant in examining recruits. Par. 8, S. O. 93, Dept. of Cal., July 26, 1898.

Major Guy L. Edie, Brigade Surgeon, having been assigned to other duties by the War Department, Par. 6, S O. 92, c. s. is hereby revoked. Par. 1, S. O. 94, Dept. Cal., July 27, 1898.

Upon the recommendation of the Chief Surgeon, Acting Assistant Surgeon T. A. McCulloch will proceed to the Presidio of San Francisco, reporting upon arrival to the commanding officer for duty with that portion of the First Troop Utah Volunteer Cavalry, which will proceed to the Sequoia National Park. Par. 11, S. O. 95, Dept. of Cal., July 28, 1898.

Acting Assistant Surgeon H. B. Emerson, is assigned to duty with the detachment of the 4th U. S. Cavalry, on the ship Tacoma, and will proceed to Manila with it. Par. 9, S. O. 95, Dept. of Cal., July 28, 1898.

The following named medical officers are assigned to duty with the 1st Troop, Utah Volunteer Cavalry, for duty at the Yosemite and Sequoia National Parks: Yosemite Park, Acting Assistant Surgeon F. B. Robinson, now at the Presidio of San Francisco; Sequoia Park, Acting Assistant Surgeon T. A. McCulloch, now at the Presidio of San Francisco. Par. 2, S. O. 96, Dept. of Cal., July 29, 1898.

Acting Assistant Surgeon S. J. Fraser will proceed to the Presidio of San Francisco, reporting upon arrival to the commanding officer of the Division Field Hospital for duty at that Hospital. Par. 9, S. O. 96, Dept. of Cal., July 29, 1898.

Upon arrival of Acting Assistant Surgeon S. J. Fraser at the Division Field Hospital at the Presidio of San Francisco, Captain R. M. Kirby Smith, Assistant Surgeon, 1st Tennessee Volunteer Infantry, will stand relieved from duty at that Hospital, and will rejoin his regiment. Par. 10, S. O. 96, Dept. of Cal., July 29, 1898.

Par. 8, S. O. 97, c. s , relating to Acting Assistant Surgeon Ernest Pring, is rescinded. Par. 3, S. O. 98, Dept. of Cal., Aug. 2, 1898.

Major W. S. H. Matthews, Surgeon, 51st Iowa Volunteer Infantry, is hereby assigned to duty at the Division Field Hospital at the Presidio of San Francisco. He will report to the commanding officer of that Hospital without delay. Par. 6, S. O. 98, Dept. of Cal., August 2, 1898.

Leave of absence for ten days, to take effect on or about the 12th instant, is granted Captain T. A. Rottanzi, Assistant Surgeon, 6th California Volunteer Infantry. Par. 4, S. O. 101, Dept. of Cal., August 5, 1898.

A Board of Medical Officers to consist of: Major Edward B. Mosely, Surgeon, Major Lewis R. Dawson, Surgeon, 1st Washington Volunteer Infantry, First Lieutenant Elmer M. Brown, Assistant Surgeon, 1st Washington Volunteer Infantry, is appointed to meet at the Presidio of San Francisco, at the call of the president of the board, to make personal examination of, and consider all cases of enlisted men brought before it on surgeon's certificate of disability, from troops belonging to the Department of California. Par. 1, S. O. 102, Dept. of Cal., August 6, 1898.

Captain Ira Ladd, Assistant Surgeon, is relieved from duty at the Division Field Hospital, Presidio of San Francisco, and will report to his regiment for duty. Par. 5, S. O. 106, August 11, 1898.

Acting Assistant Surgeon Henry du R. Phelan, is relieved from duty at the Recruiting Rendezvous in this city and will report to the commanding officer, Division Field Hospital, Presidio of San Francisco, Cal., for duty. Par. 6 S. O. 106, August 11, 1898.

Major W. S. H. Matthews, Surgeon, 51st Iowa Volunteer Infantry, is assigned to the command of the Division Field Hospital, Presidio of San Francisco, Cal., relieving Brigade Surgeon W. O. Owens. Par. 2, S. O. 106, Dept. of Cal., August 11, 1898.

Brigade Surgeon R. R. Morris, is relieved from duty in the Division Field Hospital, Presidio of San Francisco, and will report to Brigadier General Charles King, as Surgeon of the 2d Brigade. Par. 3 S. O. 106, Dept. of Cal., August 11, 1898.

Brigade Surgeon R. R. Morris, Major, is relieved from further duty at the Division Field Hospital, Camp Merriam, Presidio, Cal. and will report to Brigadier General Charles King for duty with troops embarking on U. S. Transport "Arizona." Par. 5, S. O. 107, Dept. of Cal., August 12, 1898.

Assistant Surgeon Henry Page, assigned to duty with the Third Battalion, 18th U. S. Infantry, and will accompany it on the U. S. Transport Arizona. Acting Assistant Surgeon C. F. DeMay, assigned to duty with the Third Battalion, 23d U. S. Infantry, and will accompany it on the U. S. Transport Arizona. Par. 6, S. O. 107, Dept. of Cal., August 12, 1898.

Upon recommendation of the Chief Surgeon, Acting Surgeon W. O. Taylor, will report to the commanding officer, Expeditionary Forces, for duty at the Division Field Hospital. Par. 13, S. O. 107, Dept. of Cal., August 12, 1898.

Upon the recommendation of the Chief Surgeon, Acting Assistant Surgeon F. Taylor Malaby is relieved from further duty at Benicia Barracks, Cal., and will proceed without delay to San Francisco and report to Brigadier General Charles King, for duty with troops embarking on the U. S Transport Arizona. Par. 10, S. O. 107, Dept. of Cal., August 12, 1898.

Captain W. W. Roblee, Assistant Surgeon, 7th California Volunteer Infantry, is relieved from further duty with the 3d Battalion, 23d Infantry, and will turn over to Assistant Surgeon Henry Page, the medical supplies for which he is responsible. Par. 8, S. O. 108, Dept. of Cal., August 13, 1898.

Upon the recommendation of the Chief Surgeon of the Department, Par. 6, S. O. 107, c. s., these headquarters, is so amended as to assign Assistant Surgeon Henry Page, to duty with the 3d Battalion, 23d U S Infantry, and Acting Assistant Surgeon C. F. DeMay to duty with the 3d Battalion, 18th U. S. Infantry. Par. 5, S. O. 108, Dept. of Cal., August 13, 1898.

Major Charles E. Davis, Surgeon, 1st New York Volunteers, will proceed to Honolulu, Hawaii, on the steamer "Alliance" and will be in readiness to embark on this steamer not later than 11 o'clock A.M., on the 18th instant. Par. 8, S. O. 110, Dept. of Cal., August 16, 1898.

Major William O. Owen, Brigade Surgeon, is assigned as surgeon in charge of the Hospital Ship "Scandia." Par. 4, S. O. 111, Dept. of Cal., August 17, 1898.

The following named Acting Assistant Surgeons, will report to Major William O. Owen, Brigade Surgeon, for duty as assistants on the Hospital Ship "Scandia": F. Taylor Malaby, in this city, Ernest Kinloch Johnstone, at Division Field Hospital, Presidio of San Francisco, Henry du R. Phelan, at Division Field Hospital, Presidio of San Francisco. Par. 5, S. O. 111, Dept. of Cal., August 17, 1898.

Major Lewis R. Dawson, Surgeon First Washington Volunteer Infantry, is relieved from duty as a member of the general court martial appointed by Par. 2, S. O. 97, c. s. Par. 6, S O. 111, Dept. of Cal., August 17, 1898.

First Lieutenant Donald McRae, Assistant Surgeon, 51st Iowa Volunteer Infantry, is relieved from duty at the Division Field Hospital, Presidio of San Francisco, and will report for duty with his regiment. Par. 1, S. O. 113, Dept. of Cal., August 19, 1898.

Par. 4, S. O. 111, c. s., from these headquarters, is amended to read as follows: Major William O. Owen, Brigade Surgeon, is assigned to duty on the U. S. Transport "Scandia." Par. 8, S. O. 113, Dept. of Cal., August 19, 1898.

Leave of absence for ten days, is granted Captain A. J. Pedlar, Assistant Surgeon, 1st Battalion Heavy Artillery, California Volunteers. Par. 12, S. O. 113, Dept. of Cal., August, 19, 1898.

Captain P. M. Russell, Assistant Surgeon, 7th California Volunteer Infantry, will render medical attendance to the 1st Battalion, Heavy Artillery, California Volunteers, at Camp Merriam, Presidio Reservation, during the absence on leave under Par. 3, of these orders, of Captain A. J. Pedlar. Par. 13, S O. 113, Dept. of Cal., August 19, 1898.

Captain W. W. Roblee, Assistant Surgeon, 7th California Volunteer Infantry, is assigned to duty with the 3d Battalion, 23d U. S Infantry, vice 1st Lieutenant Henry Page, Assistant Surgeon, who is relieved with the 3d Battalion, 23d U. S. Infantry, and assigned to duty on the U. S. Transport "Scandia." Captain Henry D. Smith, Assistant Surgeon, 20th Kansas Volunteer Infantry, is assigned to duty at the Division Field Hospital, Presidio of San Francisco. Par. 2, S. O 118, Dept. of Cal., August 25, 1898.

Upon the recommendation of the Chief Surgeon, Acting Assistant Surgeon Herbert Gunn, now in this city, is assigned to duty at the Division Field Hospital, the Presidio of San Francisco, Cal. Par. 2, S. O. 119, Dept. of Cal, August 26, 1898.

The leave of absence for ten days, granted Captain T. A. Rottanzi, Assistant Surgeon, 6th California Volunteer Infantry, by Par. 4, S. O. 101, c. s., from these headquarters, is extended five days. Par. 2, S. O. 117, Dept. of Cal., August 26, 1898.

A Board of Medical Officers, to consist of: Major Edward B. Moseley, Surgeon, Major W. S. H. Matthews, Surgeon, 51st Iowa Volunteer Infantry, Captain R. M. Kirby Smith, Assistant Surgeon, 1st Tennessee Volunteer Infantry, is hereby appointed to convene at the Presidio of San Francisco, Cal., on Thursday, the 1st proximo, at 10 o'clock A.M., or as soon thereafter as practicable, to investigate the origin and spread of disease at Camp Merritt, this city, and Camp Merriam, Presidio Reservation. Par. 2, S. O. 122, Dept. of Cal., August 30, 1898.

Captain W. W. Roblee, Assistant Surgeon, 7th California Volunteer Infantry, is relieved from duty with the 3d Battalion, 23d U. S. Infantry, and will rejoin his regiment for duty; and Captain Ira Ladd, Assistant Surgeon, 7th California Volunteer Infantry, is assigned to temporary duty with the 3d Battalion, 23d U. S. Infantry. Par. 8, S. O. 123, Dept. of Cal., August 31, 1898.

Upon the recommendation of the Chief Surgeon, Captain Isaac P. Ware, Assistant Surgeon, is relieved from duty as examiner of recruits in this city and assigned, for temporary duty, at the Division Field Hospital, the Presidio of San Francisco, Cal. Par. 1, S. O. 124, Dept. of Cal., September 2, 1898.

In obedience to telegraphic instructions from the War Department, Adjutant General's Office, medical officers of the 8th California Volunteer Infantry are assigned to stations in the Department of California and the Department of the Columbia, as follows: Major F. W. Dudley, Surgeon, to Benicia Barracks, California, J. D. Yost, Assistant Surgeon, to the Department of the Columbia, 1st Lieutenant C. D. McGettigan, Assistant Surgeon, to the Presidio of San Francisco. Par. 1, S. O. 14, Dept. of Cal., Sept. 8, 1898.

Upon arrival at Benicia Barracks, of Major F. W. Dudley, Surgeon, Captain C. A. Rodgers, Assistant Surgeon, 6th California Volunteer Infantry, will be relieved from duty at that post and will proceed, by rail, to the [illegible] rendezvous of that regiment, at the Presidio of San Francisco, Cal. Par. 2, S. O. 130, Dept. of Cal., September 8, 1898.

Upon arrival of First Lieutenant C. D. McGettigan, Assistant Surgeon, 8th California Volunteer Infantry, at Camp near Fort Point, Acting Assistant Surgeon James B. Cutler, will be relieved from duty at that camp, transferring to Assistant Surgeon McGettigan all medical and hospital property for which he may be accountable. Upon completion of the transfer, Acting Assistant Surgeon Cutler will proceed to the Presidio of San Francisco, reporting upon arrival to the Surgeon in charge of the Division Field Hospital, for temporary duty. Par. 3, S. O. 130, Dept. of Cal., September 8, 1898.

Acting Assistant Surgeon W. O. Taylor, is relieved from duty at the Division Field Hospital, and will report to the commanding officer, Battalion Heavy Artillery, California Volunteers at Camp Merriam, Presidio Reservation, for duty with that battalion. Par. 1, S. O. 131, Dept. of Cal., Sept. 10, 1898.

Captain T. A. Rottanzi, Assistant Surgeon, 6th California Volunteer Infantry, is relieved from station at the Presidio of San Francisco, and will report to his regimental commander at the place of rendezvous of that regiment. Par. 3, S. O. 132, Dept. of Cal., September 12, 1898.

First Lieutenant J. D. Yost, Assistant Surgeon, 8th California Volunteer Infantry, will proceed by rail to-morrow, the 14th instant, via Portland, Oregon, to Vancouver Barracks, Washington, for station. Par. 2, S. O. 133, Dept. of Cal., September 13, 1898.

ITEMS.

Dr. W. A. Phillips has removed from Pacific Grove, Cal., to Reno, Nev.

Dr. Louis A. Kengla has removed from 1303 Polk to 1121 Sutter st., San Francisco, Cal.

Dr. Wm. A. Edwards has removed from 1854 Fourth street, San Diego, to the Hotel Coronado, Coronado, Cal.